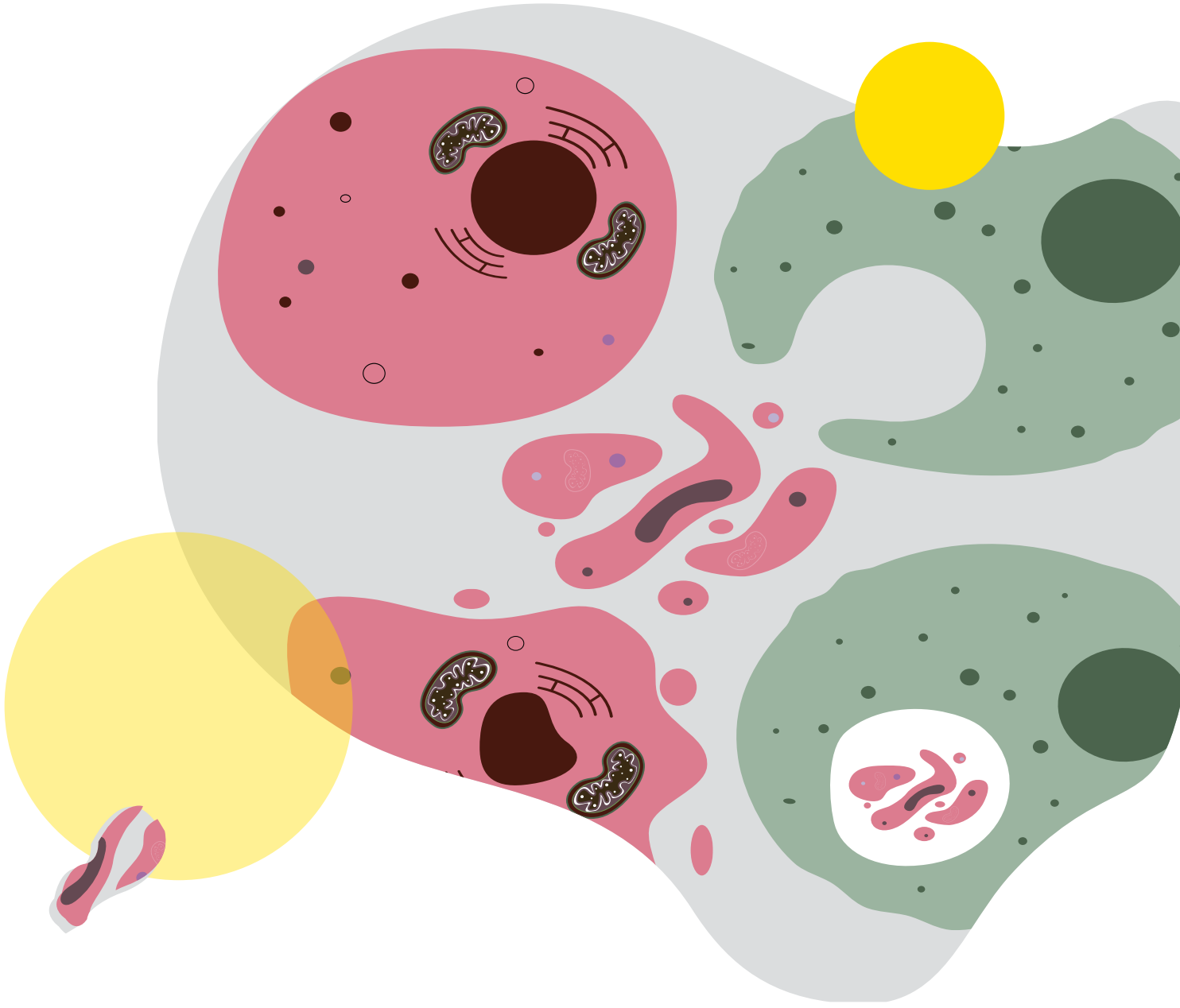
ABclonal Technology®

Complete Solution for Programmed Cell Death Research



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COMPANY PROFILE

ABclonal is an innovative growth company with the aim to provide reliable and cost-effective products and services for both basic and translational research in the cutting edges of biomedical science.

Innovation is our DNA.ABclonal has established R&D centers in the worldwide with different focuses to support technical innovation and product development for protein science and molecular biology. We always carefully listen to the opinions and feedback from talented scientists across the globe,quickly translate their needs into our product development pipeline,dedicating to develop the valuable research tools based on state-of-the-art technologies to meet the needs of innovation in a timely manner.

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Introduction

Programmed cell death (PCD) is a cell death process mediated by specific molecular programs regulated by genes within cells. It plays a crucial role in the normal development of multicellular organisms and the maintenance of homeostasis in the body. To date, at least five major forms of PCD have been discovered and extensively studied, including apoptosis, autophagy or autophagic cell death, necroptosis, and the gradually emerging ferroptosis and cuproptosis. Different forms of PCD can be distinguished by their unique morphological, biochemical, and molecular characteristics. Moreover, the key genes involved in different forms of PCD are mostly evolutionarily conserved, and some effector molecules often serve as specific evaluation indicators for PCD, together with morphological and biochemical detection methods, to detect and analyze different PCD processes.

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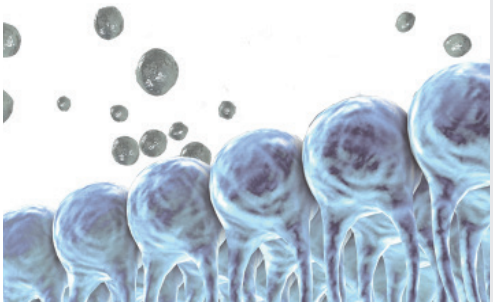
Iron Homeostasis and Ferroptosis

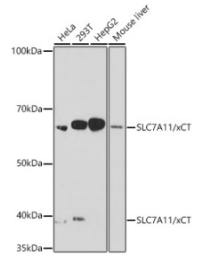


Ferroptosis is a form of programmed cell death that depends on iron ions. It is caused by changes in metabolism and the accumulation of peroxidized lipids, which damage the cell membrane. The initiation and execution of ferroptosis are regulated by multiple molecular mechanisms, which can be broadly categorized as: A) iron homeostasis regulation; B) redox regulation; C) GSH homeostasis regulation; D) lipid metabolism regulation; E) glucose metabolism regulation; and F) mitochondrial function regulation. Ferroptosis is associated with various pathological processes, including tumors, neurodegenerative diseases, brain trauma, and ischemia-reperfusion injury in various organs. It also plays a role in the heat stress response in plants.

Hot-Selling Antibodies in Iron Homeostasis and Ferroptosis Research

SLC7A11/xCT Rabbit mAb

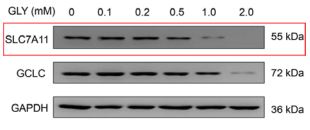
Citations (42) Cat.No.: A2413
Application: WB Reactivity: H, M, R



SLC7A11/xCT Rabbit mAb

Citation

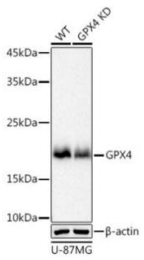
Cat.No.: A2413
Application: WB Reactivity: M



PMID:36521597

[KD Validated] GPX4 Rabbit mAb

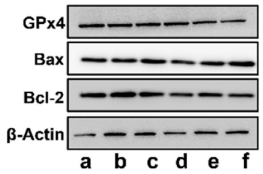
Citations (31) Cat.No.: A11243
Application: WB Reactivity: H, M, R



[KD Validated] GPX4 Rabbit mAb

Citation

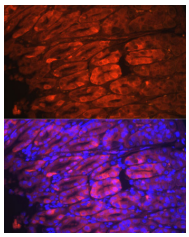
Cat.No.: A11243
Application: WB Reactivity: M



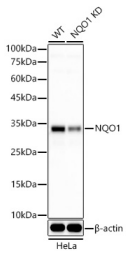
PMID:36176720

[KD Validated] NQO1 Rabbit mAb

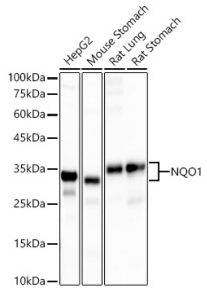
Citations (26) Cat.No.: A19586 Application: IF/ICC, WB Reactivity: H, M, R



Mouse stomach



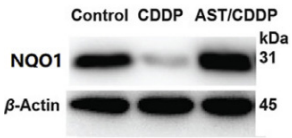
HeLa cells



[KD Validated] NQO1 Rabbit mAb

Citation

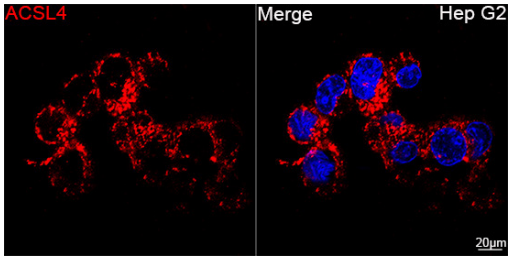
Cat.No.: A19586
Application: WB Reactivity: M



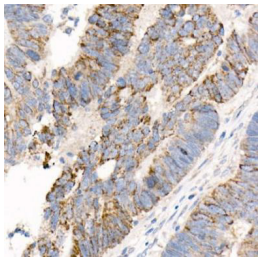
PMID:35127378

ACSL4 Rabbit mAb

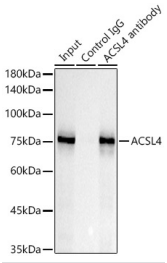
Citations (6) Cat.No.: A20414 Application: IF/ICC, IHC-P, IP, WB Reactivity: H, M, R



Hep G2 cells



Human colon carcinoma



Hep G2 cells

Iron Homeostasis and Ferroptosis Antibodies

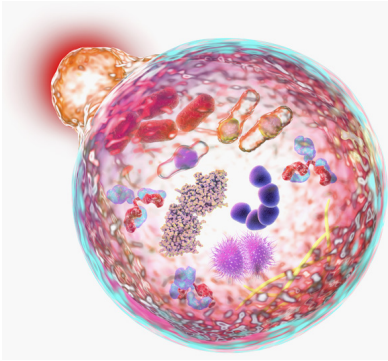
Recombinant Rabbit mAb

Category	Target	Cat.No.	Product Name	Application	Reactivity
Iron ion uptake and efflux	Ceruloplasmin	A20229	Ceruloplasmin Rabbit mAb	IF/ICC, IHC-P, WB	H, M, R
	CD71	A22161	CD71/Transferrin Receptor Rabbit mAb	IF/ICC, IHC-P, WB	H, M, R
Iron ion storage	FTH1	A19544	Ferritin Heavy Chain Rabbit mAb	WB	H, M, R
Iron ion regulatory protein	ACO1	A4821	Aconitase 1 (ACO1) Rabbit mAb	IF/ICC, WB	H, M, R
Transcription factor	BACH1	A22230	BACH1 Rabbit mAb	CHIP, IP, WB	H, M
	YAP	A19134	[KO Validated] YAP1 Rabbit mAb	IF/ICC, IHC-P, IP, WB	H, M, R
		A22650	[KO Validated] YAP1 Rabbit mAb	CUT&Tag, CHIP, IP, WB	H, M, R
		A21216	[KO Validated] YAP1 Rabbit mAb	ChIP, IF/ICC, IHC-P, IP, WB	H, M, R
	STAT3	A19566	[KO Validated] STAT3 Rabbit mAb	IHC-P, IP, WB	H, M, R
		A22434	STAT3 Rabbit mAb	IF/ICC, IP, WB	H, M, R
		AP0705	Phospho-STAT3-Y705 Rabbit mAb	IHC-P, IP, WB	H, M, R
Redox regulation	GPX4	A11243	[KD Validated] GPX4 Rabbit mAb	WB	H, M, R
	HO-1	A19062	[KO Validated] Heme Oxygenase 1 (HO-1/HMOX1) Rabbit mAb	IHC-P, IP, WB	H, M, R
	LOXs	A2877	ALOX5 Rabbit mAb	IF/ICC, IHC-P, WB	H, M, R
	NQO1	A19586	[KD Validated] NQO1 Rabbit mAb	IF/ICC, WB	H, M, R
	NOX4	A22149	NADPH oxidase 4 (NOX4) Rabbit mAb	IHC-P, IF/ICC	H, M, R
GSH homeostasis regulation	CBS	A11612	CBS Rabbit mAb	IF/ICC, IHC-P, WB	H, M, R
	CD44	A21919	CD44 Rabbit mAb	IF/ICC, FC, IHC-P, WB	H
	GOT1	A11363	GOT1 Rabbit mAb	IF/ICC, WB	H, M, R
	GSS	A11557	Glutathione Synthetase (GSS) Rabbit mAb	IF/ICC, WB	H, M, R
	SLC7A11	A2413	SLC7A11/xCT Rabbit mAb	WB	H, M, R
Lipid metabolism regulation	ACSL3	A22085	ACSL3 Rabbit mAb	IF/ICC, WB	H, M, R
	ACSL4	A20414	ACSL4 Rabbit mAb	IF/ICC, IHC-P, IP, WB	H, M, R
	ACC1	A19627	ACC1 Rabbit mAb	IHC-P, IP, WB	H, M, R
	Citrate synthetase	A4569	Citrate synthetase Rabbit mAb	IF/ICC, IHC-P, WB	H, M, R
Carbohydrate metabolism regulation	PHGDH	A22129	PHGDH Rabbit mAb	IF/ICC, IHC-P, WB	H, M, R
Heat shock protein	HSPB1	A11156	HSP27/HSPB1 Rabbit mAb	IF/ICC, WB	H, M, R
Mitochondrial function regulation	VDAC1	A19707	VDAC1 Rabbit mAb	IF/ICC, IHC-P, WB	H, M, R

Publications

1. J. Zhan, P. Cui, Z. Yu, W. Qu, M. Luo, SDX on the X chromosome is required for male sex determination. Cell Res 32, 99-102 (2022).	
VDAC1 Rabbit mAb (A19707)	**IF: 46.297**
2.H. Song et al., Methyltransferase like 7B is a potential therapeutic target for reversing EGFR-TKIs resistance in lung adenocarcinoma. Mol Cancer 21, 43 (2022).	
[KO Validated] Heme Oxygenase 1 (HO-1/HMOX1) Rabbit mAb (A19062)	**IF: 41.444**
3.S. Li et al., ASC deglutathionylation is a checkpoint for NLRP3 inflammasome activation. J Exp Med 218, (2021).	
ACSL4 Rabbit mAb (A20414)	**IF: 17.579**
4.C. Liu et al., Cytoplasmic SHMT2 drives the progression and metastasis of colorectal cancer by inhibiting beta-catenin degradation. Theranostics 11, 2966-2986 (2021).	
CD44 Rabbit mAb (A19020)	**IF: 11.6**
5.J. W. Song et al., GOLPH3/CKAP4 promotes metastasis and tumorigenicity by enhancing the secretion of exosomal WNT3A in non-small-cell lung cancer. Cell Death Dis 12, 976 (2021).	
MUC1 Rabbit mAb (A19081)	**IF: 9.685**
6.Q. Sun et al., Rho family GTPase 1 (RND1), a novel regulator of p53, enhances ferroptosis in glioblastoma. Cell Biosci 12, 53 (2022).	
[KD Validated] GPX4 Rabbit mAb (A11243)	**IF: 9.584**
7.T.Wu et al., Nitrogen-doped graphene quantum dots induce ferroptosis through disrupting calcium homeostasis in microglia. Part Fibre Toxicol 19, 22 (2022).	
SLC7A11/xCT Rabbit mAb (A2413)	**IF: 9.112**

Autophagy

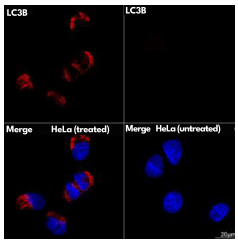


Autophagy is a conserved intracellular degradation system in eukaryotes. It responds to various stressors and stimuli and maintains the balance of cells, tissues, and organisms. It is associated with many physiological and pathological processes, such as development, differentiation, immunity, inflammation, tumors, cardiovascular diseases, and neurodegenerative diseases. Key Target of the autophagy signaling pathway include components of the autophagy initiation complex (such as ULK1 and Beclin-1), autophagosome extension-related molecules (such as ATG5, ATG12), autophagosome formation markers LC3, and various transport receptors that interact with LC3 (such as p62, BNIP3, etc.).

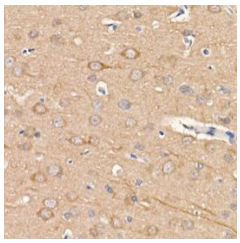
Hot-Selling Antibodies for Autophagy Research

[KO Validated] LC3B Rabbit mAb

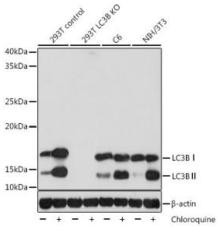
Citations (69) Cat.No.: A19665 Application: IF/ICC, IHC-P, IP, WB Reactivity: H, M, R



HeLa cells



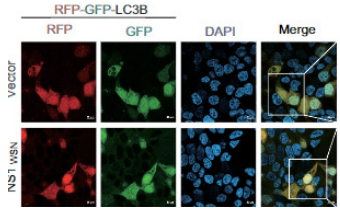
Rat brain



[KO Validated] LC3B Rabbit mAb

Citation

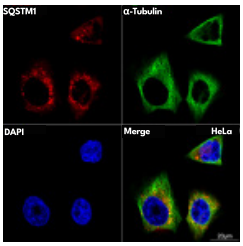
Cat.No.: A19665 Application: IF/ICC
Reactivity: H



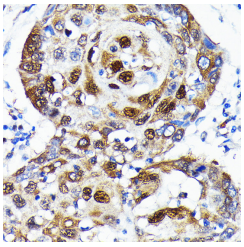
PMID:36300799

[KO Validated] SQSTM1/p62 Rabbit mAb

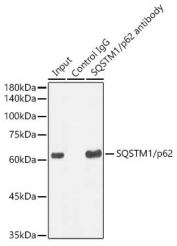
Citations (44) Cat.No.: A19700 Application: IF/ICC, IHC-P, IP, WB Reactivity: H, M, R



HeLa cells



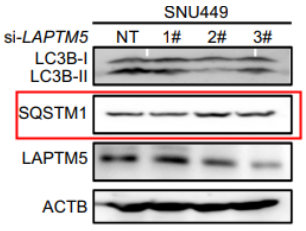
Human lung cancer



[KO Validated] SQSTM1/p62 Rabbit mAb

Citation

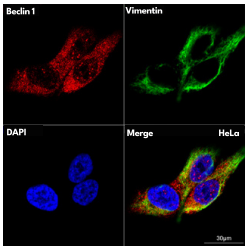
Cat.No.: A19700 Application: WB
Reactivity: H



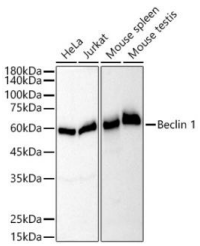
PMID:36037300

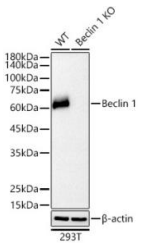
[KO Validated] Beclin 1 Rabbit mAb

Citations (2) Cat.No.: A21191 Application: IF/ICC, IP, WB Reactivity: H, M, R



HeLa cells

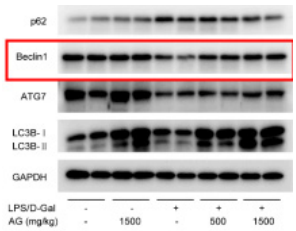




[KO Validated] Beclin 1 Rabbit mAb

Citation

Cat.No.: A21191 Application: WB
Reactivity: M



PMID:35739966

Autophagy Research Antibodies

Recombinant | Rabbit mAb

Category	Target	Cat.No.	Product Name	Application	Reactivity
Beclin-1 complex and accessory proteins	Beclin 1	A22361	[KO Validated] Beclin 1 Rabbit mAb	IF/ICC, WB	H, M, R
		A21191	[KO Validated] Beclin 1 Rabbit mAb	IF/ICC, IP, WB	H, M, R
		A21242	[KO Validated] Beclin 1 Rabbit mAb	IF/ICC, WB	H, M, R
	PIK3C3	A12295	PIK3C3/VPS34 Rabbit mAb	IF/ICC, IP, WB	H, M, R
	PIK3R4	A5922	PIK3R4/VPS15 Rabbit mAb	IF/ICC, WB	H, M, R
	Bcl-2	A19693	Bcl-2 Rabbit mAb	IHC-P, IP, WB	H, M, R
		A21873	Bcl-2 Rabbit mAb	IHC-P, IP, WB	H
Autophagosomal elongation-related proteins	ATG5	A19677	[KO Validated] ATG5 Rabbit mAb	IHC-P, IP, WB	H, M, R
	ATG12	A19610	ATG12 Rabbit mAb	WB	H, M, R
		A22788	ATG12 Rabbit mAb	IHC-P, IP, WB	H, M
	Atg16L1	A3637	ATG16L1 Rabbit mAb	WB	H, M
	ATG7	A19604	[KO Validated] ATG7 Rabbit mAb	IHC-P, IP, WB	H, M, R
		A21895	ATG7 Rabbit mAb	IHC-P, IP, WB	H
LC3 family	LC3	A19665	[KO Validated] LC3B Rabbit mAb	IF/ICC, IHC-P, IP, WB	H, M, R
	MAP1LC3A	A12319	MAP1LC3A Rabbit mAb	IP, WB	H, M, R
		A22428	MAP1LC3A Rabbit mAb	IHC-P, WB	H, M, R
	GABARAP	A4335	GABARAP Rabbit mAb	WB	H, M, R
	GABARAPL2	A9585	GABARAPL2 Rabbit mAb	WB	H, M, R
LC3 processing-related proteins	ATG4B	A5059	ATG4B Rabbit mAb	IF/ICC, WB	H, M, R
	ATG7	A19604	[KO Validated] ATG7 Rabbit mAb	IHC-P, IP, WB	H, M, R
	ATG3	A19594	ATG3 Rabbit mAb	IHC-P, WB	H, M, R
Autophagosomal substrate transport proteins	SQSTM1/p62	A19700	[KO Validated] SQSTM1/p62 Rabbit mAb	IF/ICC, IHC-P, IP, WB	H, M, R
	BNIP3	A19593	BNIP3 Rabbit mAb	IHC-P, WB	H, M, R

Publications

1.C. Jian et al., Low-Dose Sorafenib Acts as a Mitochondrial Uncoupler and Ameliorates Nonalcoholic Steatohepatitis. Cell Metab 31, 892-908 e811 (2020).

BNIP3 Rabbit mAb (A19593) **IF: 31.373**

2.W. Yu et al., Kir2.1-mediated membrane potential promotes nutrient acquisition and inflammation through regulation of nutrient transporters. Nat Commun 13, 3544 (2022).

[KO Validated] LC3B Rabbit mAb (A19665) **IF: 17.694**

3. P. Hu et al., Cholesterol-associated lysosomal disorder triggers cell death of hematological malignancy: Dynamic analysis on cytotoxic effects of LW-218. Acta Pharm Sin B 11, 3178-3192 (2021).

[KO Validated] SQSTM1/p62 Rabbit mAb (A19700) **IF: 14.903**

4.J. Pan et al., Genome-Scale CRISPR screen identifies LAPTM5 driving lenvatinib resistance in hepatocellular carcinoma. Autophagy 19, 1184-1198 (2023).

[KO Validated] SQSTM1/p62 Rabbit mAb (A19700) **IF: 13.391**

5.J. Yao et al., Isoginkgetin, a potential CDK6 inhibitor, suppresses SLC2A1/GLUT1 enhancer activity to induce AMPK-ULK1-mediated cytotoxic autophagy in epatocellular carcinoma. Autophagy 19, 1221-1238 (2023).

[KO Validated] ATG5 Rabbit mAb (A19677) **IF: 13.391**

6.Y. Tan et al., HucMSC-derived exosomes delivered BECN1 induces ferroptosis of hepatic stellate cells via regulating the xCT/GPX4 axis. Cell Death Dis 13, 319 (2022).

[KO Validated] LC3B Rabbit mAb (A19665) **IF: 10.787**

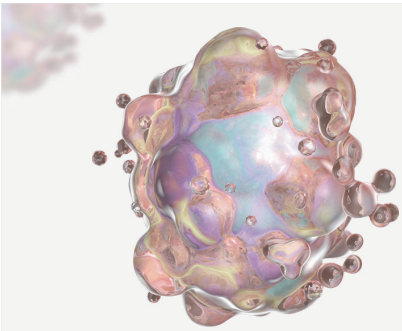
7.Z. Deng et al., SIRT1 attenuates sepsis-induced acute kidney injury via Beclin1 deacetylation-mediated autophagy activation. Cell Death Dis 12, 217 (2021).

[KO Validated] ATG7 Rabbit mAb (A19604) **IF:9.685**

8.N. Ma et al., Interleukin-37 protects against acinar cell pyroptosis in acute pancreatitis. JCI Insight 7, (2022).

[KO Validated] Beclin 1 Rabbit mAb (A21191) **IF: 9.484**

Apoptosis

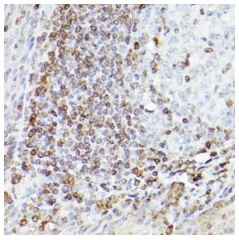


Apoptosis is a genetically controlled, self-ordered cell death process that occurs under physiological or pathological conditions to help the organism adapt to its environment. It works together with cell proliferation to maintain normal growth, development, and internal environment stability of the organism. Cell apoptosis involves a series of actions such as gene activation, expression, and regulation. In the process of apoptosis, the Bcl-2 family of proteins and the Caspase family play a crucial role. Apoptosis is a widespread phenomenon in various organisms, such as embryonic development, morphogenesis, tissue homeostasis, and immune response to the organism.

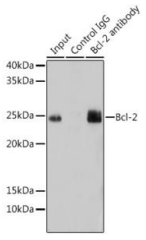
Hot-Selling Antibodies for Apoptosis Research

Bcl-2 Rabbit mAb

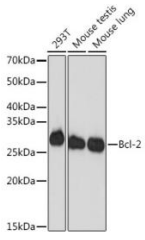
Citations (43) Cat.No.: A19693 Application: IHC-P, IP, WB Reactivity: H, M, R



Human tonsil



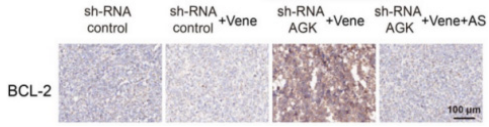
Mouse lung



Bcl-2 Rabbit mAb

Citation

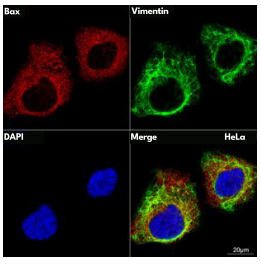
Cat.No.: A19693 Application: IHC-P
Reactivity: M



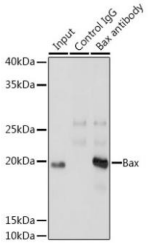
PMID:35910796

[KO Validated] Bax Rabbit mAb

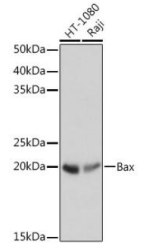
Citations (4) Cat.No.: A18642 Application: IF/ICC, IHC-P, IP, WB Reactivity: H, M, R



HeLa cells



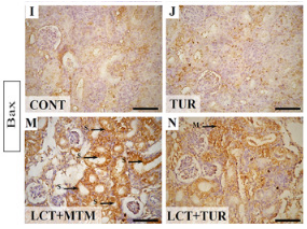
293T cells



[KO Validated] Bax Rabbit mAb

Citation

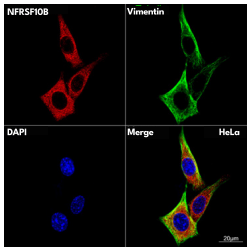
Cat.No.: A18642 Application: IHC-P
Reactivity: M



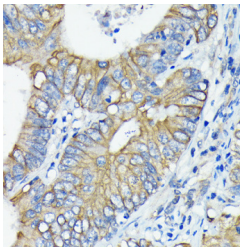
PMID:35933907

DR5/TRAILR2/TNFRSF10B Rabbit mAb

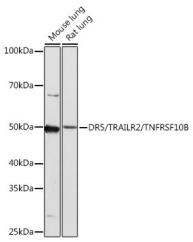
Citations (1) Cat.No.: A19043 Application: IF/ICC, IHC-P, WB Reactivity: H, M, R



NIH/3T3 cells



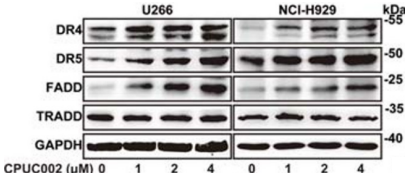
Human colon carcinoma



DR5/TRAILR2/TNFRSF10B Rabbit mAb

Citation

Cat.No.: A19043 Application: WB
Reactivity: H



PMID:33126266

Apoptosis Research Antibodies

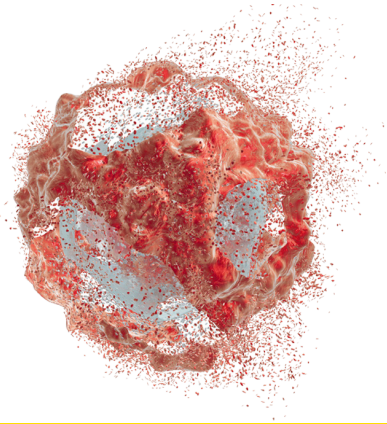
Recombinant Rabbit mAb

Category	Target	Cat.No.	Product Name	Application	Reactivity
Bcl2 family (pro-survival)	Bcl-2	A19693	Bcl-2 Rabbit mAb	IHC-P, IP, WB	H, M, R
Bcl2 family (pro-apoptotic)	Bax	A18642	[KO Validated] Bax Rabbit mAb	IF/ICC, IHC-P, IP, WB	H, M, R
		A20227	[KO Validated] Bax Rabbit mAb	IF/ICC, IHC-P, IP, WB	H, M, R
	Bad	A19595	Bad Rabbit mAb	IHC-P, WB	H, M, R
	Bad	AP1371	Phospho-Bad-S112 Rabbit mAb	IHC-P, WB	H, M, R
	Puma	A3752	PUMA Rabbit mAb	IF/ICC, IHC-P, WB	H, M, R
Caspase family	Caspase-3	A19654	[KO Validated] active + pro Caspase-3 Rabbit mAb	WB	H, M, R
	Caspase-3 p12	A19664	Caspase-3 p12 Rabbit mAb	IF/ICC, IHC-P, WB	H, M, R
	Caspase-6	A19559	Caspase-6 Rabbit mAb	IF/ICC, WB	H, M
	Caspase-9	A11910	Caspase-9 Rabbit mAb	IF/ICC, IHC-P, WB	H, M, R
		A22532	Caspase-9 Rabbit PolymAb®	IF/ICC, IHC-P, WB	H, M, R
	Caspase-12	A22864	Caspase-12 Rabbit mAb	IHC-P, WB	H, M, R
Death receptors and related proteins	TRAILR2	A19043	DR5/TRAILR2/TNFRSF10B Rabbit mAb	IF/ICC, IHC-P, WB	H, M, R
	Fas	A19582	[KO Validated] Fas Rabbit mAb	IHC-P, WB	H, M, R
	FADD	A19838	FADD Rabbit mAb	IHC-P, WB	H, M, R
	TRAF2	A19129	[KD Validated] TRAF2 Rabbit mAb	IHC-P, IP, WB	H, M, R
Apoptosis regulatory molecules	cIAP1	A19688	[KO Validated] cIAP1 Rabbit mAb	IHC-P, WB	H, R
	XIAP	A20846	[KO Validated] XIAP Rabbit mAb	IP, WB	H, M, R
Proteins related to mitochondrial apoptotic pathway	Cytochrome C	A4912	[KO Validated] Cytochrome C Rabbit mAb	IHC-P, WB	H, M, R
	VDAC	A19707	VDAC1 Rabbit mAb	IF/ICC, IHC-P, WB	H, M, R
	AIF	A19536	AIF Rabbit mAb	IHC-P, WB	H, M, R
	Smac/Diablo	A8889	Smac/Diablo Rabbit mAb	IF/ICC, IHC-P, WB	H, M, R
DNA fragmentation related	PARP1	A19596	PARP1 Rabbit mAb	IHC-P, WB	H, M, R

Publications

1.J. Jiang et al., Direct Phosphorylation and Stabilization of MYC by Aurora B Kinase Promote T-cell Leukemogenesis. Cancer Cell 37, 200-215 e205 (2020).	
Active Caspase-3 Rabbit mAb (A11021)	**IF: 38.585**
2.P. Hu et al., Cholesterol-associated lysosomal disorder triggers cell death of hematological malignancy: Dynamic analysis on cytotoxic effects of LW-218. Acta Pharm Sin B 11, 3178-3192 (2021).	
Active Caspase-3 Rabbit mAb (A11021)	**IF: 14.903**
3.B. Nan et al., Astaxanthine attenuates cisplatin ototoxicity in vitro and protects against cisplatin-induced hearing loss in vivo. Acta Pharm Sin B 12, 167-181 (2022).	
Bax Rabbit mAb (A19684)	**IF: 14.903**
4.Z. Yu et al., LT-171-861, a novel FLT3 inhibitor, shows excellent preclinical efficacy for the treatment of FLT3 mutant acute myeloid leukemia. Theranostics 11, 93-106 (2021).	
Bcl-2 Rabbit mAb (A19693)	**IF: 11.6**
5.H. Mao et al., Ignored role of polyphenol in boosting reactive oxygen species generation for polyphenol/chemodynamic combination therapy. Mater Today Bio 16, 100436 (2022).	
[KO Validated] Cytochrome C Rabbit mAb (A4912)	**IF 10.761**
6. S. Wang et al., Selenoprotein K protects skeletal muscle from damage and is required for satellite cells-mediated myogenic differentiation. Redox Biol 50, 102255 (2022).	
[KO Validated] active + pro Caspase-3 Rabbit mAb (A19654)	**IF: 10.787**
7.Y. Yao, T. Chen, H. Wu, N. Yang, S. Xu, Melatonin attenuates bisphenol A-induced colon ijury by dual targeting mitochondrial dynamics and Nrf2 antioxidant system via activation of SIRT1/PGC-1alpha signaling pathway. Free Radic Biol Med 195, 13-22 (2023).	
RIPK1/RIP Rabbit mAb (A19580)	**IF: 8.101**

Necroptosis

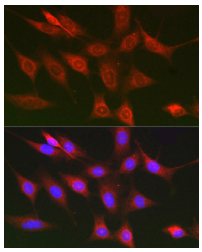


Necroptosis is an alternative form of programmed cell death that occurs when the normal apoptotic pathway is blocked. Cells undergoing necroptosis undergo morphological changes that are noticeably different from apoptosis, as they rapidly swell and their organelles also become swollen, rather than undergoing the cell shrinkage that occurs during apoptosis. Additionally, cells undergoing necroptosis do not form membrane bubbles on the plasma membrane, but instead undergo early membrane rupture, exposure of phosphatidylserine, and organelle rupture, resulting in leakage of cellular contents and triggering inflammation.

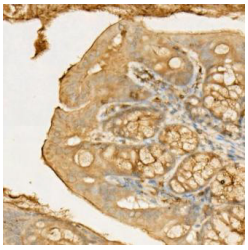
Hot-Selling Antibodies for Necroptosis

RIPK1/RIP Rabbit pAb

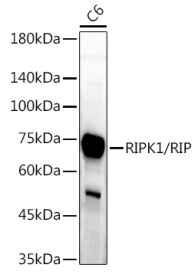
Citations (27) Cat.No.: A7414 Application: IF/ICC, IHC-P, IP, WB Reactivity: H, M, R



NIH/3T3 cells



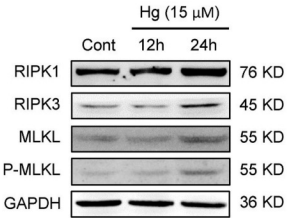
Mouse colon



RIPK1/RIP Rabbit pAb

Citation

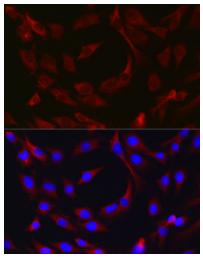
Cat.No.: A7414 Application: WB
Reactivity: Domestic Chicken



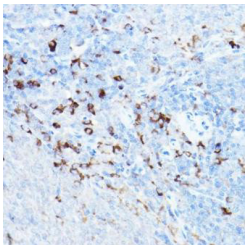
PMID:35545249

cIAP2 Rabbit pAb

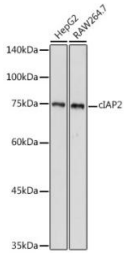
Citations (5) Cat.No.: A0833 Application: IF/ICC, IHC-P, WB Reactivity: H, M, R



A549 cells



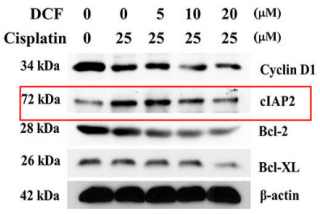
Rat spleen



cIAP2 Rabbit pAb

Citation

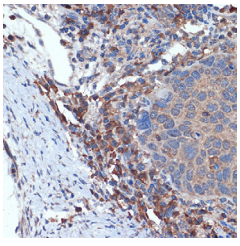
Cat.No.: A0833 Application: WB
Reactivity: H



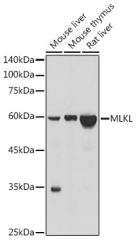
PMID:36292923

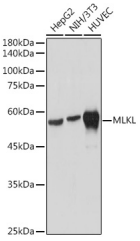
MLKL Rabbit mAb

Cat.No.: A21894 Application: IHC-P, WB Reactivity: H, M, R



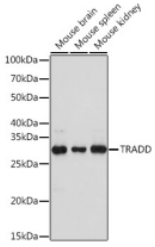
Human esophageal cancer





TRADD Rabbit pAb

Cat.No.: A18626 Application: IHC-P, WB Reactivity: H, M, R



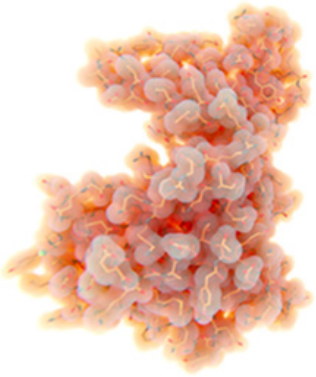
Necroptosis Research Antibodies

Category	Target	Cat.No.	Product Name	Application	Reactivity
TNFR1 and related proteins	TNFR	A0387	TNFR2/TNFRSF1B Rabbit pAb	IF/ICC, WB	H
		A13382	TNFRSF11A Rabbit pAb	IF/ICC, IHC-P, WB	H, M, R
		A14261	TNFRSF25 Rabbit pAb	IF/ICC, WB	H, M, R
		A19043	DR5/TRAILR2/TNFRSF10B Rabbit mAb	IF/ICC, IHC-P, WB	H, M, R
		A19127	TNFR2/TNFRSF1B Rabbit mAb	WB	H, M, R
		A19235	TROY/TNFRSF19 Rabbit mAb	WB	H, M, R
	TRADD	A18626	TRADD Rabbit pAb	IHC-P, WB	H, M, R
	TRAF2	A0962	TRAF2 Rabbit pAb	IHC-P, IP, WB	H, M, R
	CYLD	A3821	CYLD Rabbit pAb	IHC-P, WB	H, M, R
	TNFAIP3	A19128	TNFAIP3 Rabbit mAb	IHC-P, WB	H
	TNFAIP3	A18056	[KO Validated] TNFAIP3 Rabbit pAb	WB	H, M
	cIAP2	A0833	cIAP2 Rabbit pAb	IF/ICC, IHC-P, WB	H, M, R
Key components of the necrosome	RIPK	A19580	RIPK1/RIP Rabbit mAb	IP, WB	H
		A7414	RIPK1/RIP Rabbit pAb	IF/ICC, IHC-P, IP, WB	H, M, R
		A5431	RIPK3 Rabbit pAb	IF/ICC, IHC-P, WB	H, M, R
		A8495	RIPK4 Rabbit pAb	IHC-P, WB	H, M
	MLKL	A13451	[KO Validated] MLKL Rabbit pAb	IHC-P, WB	H, M, R
		A21894	MLKL Rabbit mAb	IHC-P, WB	H, M, R
Components related to the necrosome	FADD	A18082	[KO Validated] FADD Rabbit pAb	IP, WB	H, R
		A19838	FADD Rabbit mAb	IHC-P, WB	H, M, R
		A20252	FADD Rabbit pAb	IF/ICC, IP, WB	H, M, R
	cFLIP	A2555	cFLIP Rabbit pAb	WB	H, M, R
	Caspase-8	A19549	Caspase-8 Rabbit mAb	WB	H
		A0215	Caspase-8 Rabbit pAb	IF/ICC, IHC-P, WB	H, M, R
		A11324	Caspase-8 Rabbit pAb	IF/ICC, WB	H, M, R
		A11450	Caspase-8 Rabbit pAb	WB	H, M, R

Publications

1. C. Qianru et al., Regulation of H(2)S-induced necroptosis and inflammation in broiler bursa of Fabricius by the miR-15b-5p/TGFBR3 axis and the involvement of oxidative stress in this process. J Hazard Mater 406, 124682 (2021).	
MLKL Rabbit mAb (A19685)	**IF: 14.224**
2. L. Wang, L. Wang, X. Shi, S. Xu, Chlorpyrifos induces the apoptosis and necroptosis of L8824 cells through the ROS/PTEN/PI3K/AKT axis. J Hazard Mater 398, 122905 (2020).	
RIPK1/RIP Rabbit pAb (A7414)	**IF: 14.224**
3.Z. Yu et al., LT-171-861, a novel FLT3 inhibitor, shows excellent preclinical efficacy for the treatment of FLT3 mutant acute myeloid leukemia. Theranostics 11, 93-106 (2021).	
Caspase-8 Rabbit mAb (A19549)	**IF: 11.6**
4. C. Yin et al., Biomimetic anti-inflammatory nano-capsule serves as a cytokine blocker and M2 polarization inducer for bone tissue repair. Acta Biomater 102, 416-426 (2020).	
TNFR1/TNFRSF1A Rabbit pAb (A1540)	**IF: 10.633**
5.F. Y. Zhong et al., The Role of CD147 in Pathological Cardiac Hypertrophy Is Regulated by Glycosylation. Oxid Med Cell Longev 2022, 6603296 (2022).	
TRAF2 Rabbit pAb (A0962)	**IF: 7.31**
6. D. B. Somasundaram, S. Aravindan, R. Major, M. Natarajan, N. Aravindan, MMP-9 reinforces radiation-induced delayed invasion and metastasis of neuroblastoma cells through second-signaling positive feedback with NFkappaB via both ERK and IKK activation. Cell Biol Toxicol, (2021).	
cIAP2 Rabbit pAb (A0833)	**IF: 6.819**

Pyroptosis

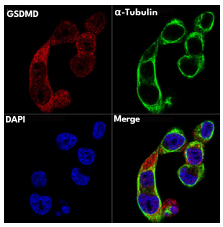


Pyroptosis is an inflammatory form of programmed cell death that is primarily activated by the inflammasome, which includes the activation of multiple caspases, including caspase-1. Pyroptosis causes the cleavage and oligomerization of various members of the gasdermin family, including GSDMD, resulting in cell perforation and subsequent cell death. Pyroptosis forces the pathogen within the cell to leave its replication site and exposes it to immune surveillance. It also triggers cytokine release and danger-associated molecular patterns (DAMPs) production, which further elicits immune response against infection.

Hot-Selling Antibodies for Pyroptosis Research

GSDMD Rabbit mAb

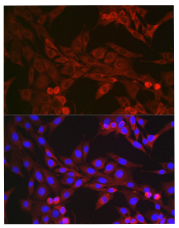
Cat.No.: A22602
Application: IF/ICC Reactivity: H, M



HeLa cells

GSDMD (Full Length+C terminal) Rabbit pAb

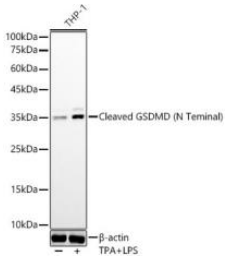
Citations (4) Cat.No.: A17308
Application: IF/ICC, WB Reactivity: H, M, R



NIH/3T3 cells

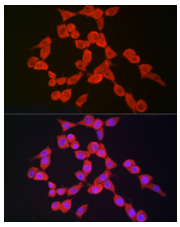
Cleaved GSDMD (N Teminal) Rabbit mAb

Cat.No.: A22523
Application: IHC-P, WB Reactivity: H, M, R



NLRP3 Rabbit pAb

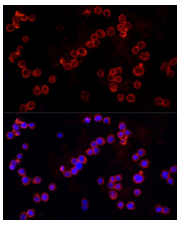
Cat.No.: A21906
Application: IF/ICC, WB Reactivity: H, M



NIH/3T3 cells

NLRC4 Rabbit pAb

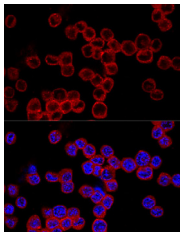
Citations (11) Cat.No.: A7382
Application: IF/ICC, WB Reactivity: H, M, R



THP-1 cells

Caspase-1 Rabbit pAb

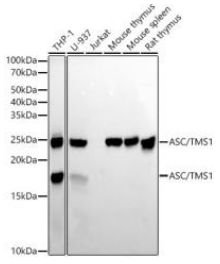
Citations (152) Cat.No.: A0964
Application: IF/ICC, WB Reactivity: H, M



RAW264.7 cells

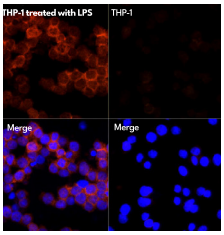
ASC/TMS1 Rabbit mAb

Citations (1) Cat.No.: A22046
Application: IHC-P, WB Reactivity: H, M, R



IL1β Rabbit mAb

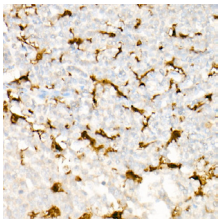
Cat.No.: A23484
Application: IF/ICC, WB Reactivity: H



THP-1 cells

IL18 Rabbit mAb

Cat.No.: A23076
Application: IHC-P, WB Reactivity: H, M, R



Human tonsil

Pyroptosis Research Antibodies

Category	Target	Cat.No.	Product Name	Application	Reactivity
Components of the inflammasome (sensors)	NLRC4	A7382	NLRC4 Rabbit pAb	IF/ICC, WB	H, M, R
		A13117	NLRC4 Rabbit pAb	IHC-P, WB	H, M
	NLRP3	A21906	NLRP3 Rabbit pAb	IF/ICC, WB	H, M
		A5652	NLRP3 Rabbit pAb	IF/ICC, WB	H, R
	NLRP6	A15628	NLRP6 Rabbit pAb	WB	H, M, R
	AIM2	A3356	AIM2 Rabbit pAb	IF/ICC, WB	H, M, R
Components of the inflammasome (adaptor molecules)	ASC/TMS1	A16672	ASC/TMS1 Rabbit pAb	IF/ICC, IHC-P, IP, WB	H, M, R
		A11433	ASC/TMS1 Rabbit pAb	IF/ICC, IHC-P, WB	H, M, R
		A22046	ASC/TMS1 Rabbit mAb	IHC-P, WB	H, M, R
Components of the inflammasome (pro-inflammatory caspases)	Caspase-1	A0964	Caspase-1 Rabbit pAb	IF/ICC, WB	H, M
		A21296	Caspase-1 Rabbit pAb	IHC-P, IF/ICC	H, M, R
		A21085	Caspase-1 Rat mAb	WB	M, R
	Caspase-4	A19305	Caspase-4 Rabbit pAb	IHC-P, WB	H
	Caspase-11	A6495	Caspase-11 Rabbit pAb	WB	H, M
Pro-inflammatory cytokines	IL1 beta	A22207	IL1β Rabbit mAb	WB	H
		A23416	IL1β Rabbit mAb	WB	M
		A23484	IL1β Rabbit mAb	IF/ICC, WB	H
	IL18	A1115	IL18 Rabbit pAb	IP, WB	H, M, R
		A16737	IL18 Rabbit pAb	IF/ICC, IP, WB	H, M, R
		A23076	IL18 Rabbit mAb	IHC-P, WB	H, M, R
Pyroptosis effectors	GSDMD	A20728	GSDMD Rabbit mAb	WB	H
		A22602	GSDMD Rabbit mAb	IF/ICC	H, M
		A22523	Cleaved GSDMD (N Teminal) Rabbit mAb	IHC-P, WB	H, M, R
		A17308	GSDMD (Full Length+C terminal) Rabbit pAb	IF/ICC, WB	H, M, R
		A20197	GSDMD (Full Length+N terminal) Rabbit pAb	IF/ICC, WB	H, M, R
	DFNA5/GSDME	A7432	GSDME Rabbit pAb	IF/ICC, IHC-P, WB	H, M, R

Publications

1.B. Huang et al., Ticagrelor inhibits the NLRP3 inflammasome to protect against inflammatory disease independent of the P2Y(12) signaling pathway. Cell Mol Immunol 18, 1278-1289 (2021).

Caspase-1 Rabbit pAb (A0964) **IF: 22.096**

2.H. Wang et al., Anti-Sca-1 antibody-functionalized vascular grafts improve vascular regeneration via selective capture of endogenous vascular stem/progenitor cells. Bioact Mater 16, 433-450 (2022).

IL1β Rabbit mAb (A19635) **IF: 16.874**

3.Z. Wang et al., Icariside Ⅱ, a main compound in Epimedii Folium, induces idiosyncratic hepatotoxicity by enhancing NLRP3 inflammasome activation. Acta Pharm Sin B 10, 1619-1633 (2020).

ASC/TMS1 Rabbit pAb (A1170) **IF: 14.903**

4.X. Jia et al., VCAM-1-binding peptide targeted cationic liposomes containing NLRP3 siRNA to modulate LDL transcytosis as a novel therapy for experimental atherosclerosis. Metabolism 135, 155274 (2022).

NLRP3 Rabbit pAb (A12694) **IF: 13.934**

5.Y. Zhao et al., p66Shc Contributes to Liver Fibrosis through the Regulation of Mitochondrial Reactive Oxygen Species. Theranostics 9, 1510-1522 (2019).

IL18 Rabbit pAb (A1115) **IF: 11.6**

6.T. Li et al., Abrocitinib Attenuates Microglia-Mediated Neuroinflammation after Traumatic Brain Injury via Inhibiting the JAK1/STAT1/NF-kappaB Pathway. Cells 11, (2022).

GSDMD Rabbit mAb (A20728) **IF: 7.666**

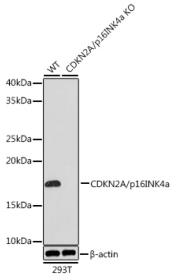
Cuproptosis

Cuproptosis is a form of cell death that is dependent on mitochondrial respiration and the direct binding of copper ions to sulfurated proteins in the tricarboxylic acid cycle. This leads to abnormal aggregation of sulfurated proteins and interferes with iron-sulfur proteins in the respiratory chain complexes, causing protein toxicity stress response and ultimately resulting in cell death. During this process, six genes involved in protein lipoylation and FDX1 are key genes that promote copper-induced death, and these genes are essential for mitochondrial aerobic metabolism. Recent studies have shown that cuproptosis-related genes have prognostic value in pancreatic cancer, melanoma, colorectal cancer, gastric cancer, lung adenocarcinoma, and other cancers.

Hot-Selling Antibodies for Cuproptosis Research

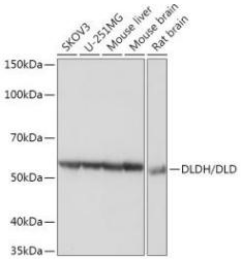
[KO Validated] CDKN2A/p16INK4a Rabbit mAb

Citations (3) Cat.No.: A11651
Application: IF/ICC, IHC-P, WB Reactivity: H



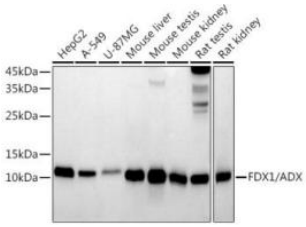
DLDH/DLD Rabbit mAb

Citations (2) Cat.No.: A5220
Application: IF/ICC, IHC-P, WB Reactivity: H, M, R



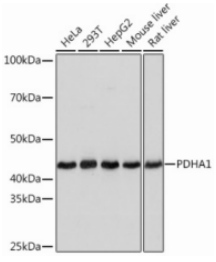
FDX1/ADX Rabbit mAb

Citations (2) Cat.No.: A20895
Application: IF/ICC, WB Reactivity: H, M, R



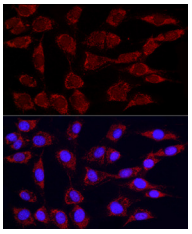
PDHA1 Rabbit mAb

Citations (2) Cat.No.: A13687
Application: IF/ICC, WB Reactivity: H, M, R



Phospho-PDHA1-S293 Rabbit mAb

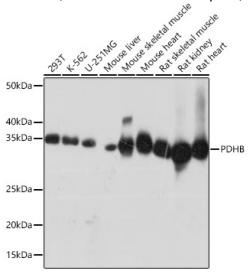
Citations (1) Cat.No.: AP1022
Application: IF/ICC, IP, WB Reactivity: H,M,R



NIH/3T3 cells

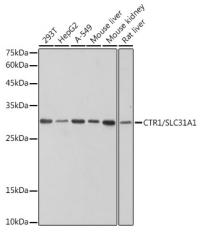
PDHB Rabbit mAb

Citations (2) Cat.No.: A4645
Application: IHC-P, WB Reactivity: H, M, R



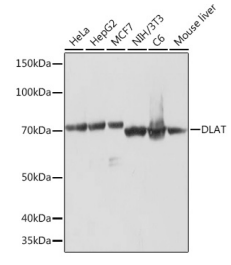
CTR1/SLC31A1 Rabbit mAb

Citations (2) Cat.No.: A0773
Application: WB Reactivity: H, M, R



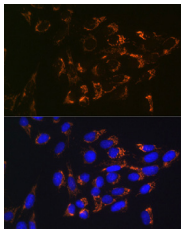
DLAT Rabbit mAb

Citations (2) Cat.No.: A8814
Application: WB Reactivity: H, M, R



Glutaminase (GLS) Rabbit mAb

Cat.No.: A11043
Application: IF/ICC , WB Reactivity: H



U-2 OS cells

Cuproptosis Research Antibodies

Category	Target	Cat.No.	Product Name	Application	Reactivity
Lipoic acid pathway	FDX1/ADX	A20895	FDX1/ADX Rabbit mAb	IF/ICC, WB	H, M, R
	DLD/DLDH	A5220	DLDH/DLD Rabbit mAb	IF/ICC, IHC-P, WB	H, M, R
		A5403	DLDH/DLD Rabbit pAb	IHC-P, WB	H, M
		A13296	DLDH/DLD Rabbit pAb	IF/ICC, IHC-P, WB	H, M
Pyruvate dehydrogenase complex	DLAT	A8814	DLAT Rabbit mAb	WB	H, M, R
		A14530	DLAT Rabbit pAb	IF/ICC, IHC-P, WB	H, M, R
	PDHA1	A13687	PDHA1 Rabbit mAb	WB, IF/ICC	H, M, R
		A17432	PDHA1 Rabbit pAb	IF/ICC, IHC-P, IP, WB	H, M, R
		A1895	PDHA1 Rabbit pAb	IF/ICC, IHC-P, IP, WB	H, M, R
		A21537	PDHA1 Rabbit pAb	IF/ICC, IP	H
		AP1022	Phospho-PDHA1-S293 Rabbit mAb	WB, IF/ICC, IP	H, M, R
		A1895	PDHA1 Rabbit pAb	IF/ICC, IHC-P, IP, WB	H, M, R
		AP1022	Phospho-PDHA1-S293 Rabbit mAb	IF/ICC, IP, WB	H, M, R
	PDHB	A4645	PDHB Rabbit mAb	IHC-P, WB	H, M, R
		A6943	PDHB Rabbit pAb	WB	H, M, R
	GLS	A11043	Glutaminase (GLS) Rabbit mAb	IF/ICC, WB	H
		A3885	Glutaminase (GLS) Rabbit pAb	IF/ICC, WB	H, M, R
	CDKN2A	A11651	[KO Validated] CDKN2A/p16INK4a Rabbit mAb	IF/ICC, IHC-P, WB	H
		A5025	[KO Validated] CDKN2A/p16INK4a Rabbit mAb	IF/ICC, WB	H
		A11058	[KO Validated] CDKN2A/p16INK4a Rabbit pAb	IP, WB	H
		A0262	[KO Validated] CDKN2A/p16INK4a Rabbit pAb	IF/ICC, WB	H, M, R
Components of branched-chain α-keto acid dehydrogenase complex	DBT	A20381	DBT Rabbit pAb	IF/ICC, IHC-P, WB	H, M, R
Components of α-ketoglutarate dehydrogenase complex	DLST	A13297	DLST Rabbit pAb	IF/ICC, IHC-P, WB	H, M, R
Proteins of the glycine cleavage system	GCSH	A13695	GCSH Rabbit pAb	IF/ICC, WB	H, M, R
Copper homeostasis	CTR1/SLC31A1	A0773	CTR1/SLC31A1 Rabbit mAb	WB	H, M, R
	ATP7A	A8399	ATP7A Rabbit pAb	WB	H, R
	ATP7B	A5676	ATP7B Rabbit pAb	WB	H, M, R

Publications

1.X. Qian et al., Bioinspired nanovehicle of furoxans-oxaliplatin improves tumoral distribution for chemo-radiotherapy. J Control Release 353, 447-461 (2023).	
CTR1/SLC31A1 Rabbit mAb (A0773)	**IF: 11.467**
2.G. Zhong et al., Cuproptosis is involved in copper-induced hepatotoxicity in chickens. Sci Total Environ 866, 161458 (2023).	
FDX1/ADX Rabbit mAb (A20895)	**IF: 10.753**
3.G. Zhong et al., Cuproptosis is involved in copper-induced hepatotoxicity in chickens. Sci Total Environ 866, 161458 (2023).	
DLST Rabbit pAb (A13297)	**IF: 10.753**
4.T. Huang et al., Insights into prognosis and immune infiltration of cuproptosis-related genes in breast cancer. Front Immunol 13, 1054305 (2022).	
PDHA1 Rabbit pAb (A1895)	**IF: 8.786**
5.Y. Zhong et al., TLR4 Modulates Senescence and Paracrine Action in Placental Mesenchymal Stem Cells via Inhibiting Hedgehog Signaling Pathway in Preeclampsia. Oxid Med Cell Longev 2022, 7202837 (2022).	
[KO Validated] CDKN2A/p16INK4a Rabbit mAb (A11651)	**IF: 7.31**
6.Y. Miao et al., Morin inhibits the transformation of fibroblasts towards myofibroblasts through regulating "PPAR-gamma-glutaminolysis-DEPTOR" pathway in pulmonary fibrosis. J Nutr Biochem 101, 108923 (2022).	
Glutaminase (GLS) Rabbit pAb (A3885)	**IF:6.117**

Research Strategies for Programmed Cell Death (PCD)

Classification of programmed cell death (PCD)	Apoptosis	Autophagy	Necroptosis	Pyroptosis	Ferroptosis
Biochemical characteristics	Cleavage and cascade activation of multiple caspases; Externalization of phosphatidylserine on the membrane; DNA fragmentation	Lipidation of LC3; Increased lysosomal activity	Phosphorylation and activation of RIPK1, RIPK3, and MLKL; Formation of RIPK1-RIPK3 complex; Oligomerization of MLKL on the cell membrane and mediation of cell pore formation; Decreased ATP levels	Activation and assembly of the inflammasome; Activation of pro-inflammatory caspases through cleavage; Cleavage of gasdermin family members, N-terminal fragment oligomerization, and mediation of cell pore formation	Decreased levels of GSH and NADPH; Inhibition of GPX4; Accumulation of iron ions and lipid peroxidation; Increased levels of COX-2; Depletion of polyunsaturated fatty acid phospholipids; Increased levels of reactive oxygen species (ROS); Production of byproduct 4-hydroxynonenal
Morphological characteristics	Cell shrinkage; Membrane blebbing; Chromatin condensation; Nuclear fragmentation; Eventually phagocytosed by phagocytes.	Accumulation of double-membrane autophagosomes in the cytoplasm (autophagic vacuoles); Fusion of autophagosomes with lysosomes for degradation of contents.	Cell and organelle swelling; Chromatin condensation; Rupture of cell membrane and release of cytoplasmic contents.	Rupture of cell membrane; Release of cell contents and pro-inflammatory cytokines.	Decreased mitochondrial density compared to normal mitochondria; Reduced or absent mitochondrial cristae; Disruption of the mitochondrial outer membrane.
Is it pro-inflammatory	No	No	Yes	Yes	Yes
Core target	Caspase-3, Caspase-9, PARP,Caspase-8, Caspase-12,Caspase-2, Bcl-2, Bax, Cytochrome C, p53, etc	LC3, ULK1, Beclin-1, Atg-5, Atg-12, p62, Bnip3, etc	RIPK1, RIPK3, MLKL, etc	Caspase-1, NLRP3, AIM2, ASC/TMS1, IL-1beta, IL-18, Gasdermin D, etc	GPX4, NRF-2, COX-2, LSH, LOXs, NOXs, SLC7A11, GSH regulatory molecules, regulatory molecules for carbohydrates and lipids
Protein analysis methods	WB, IF, FC	WB, IF, FC	WB, IF, FC	WB, IF, FC	WB, IF, FC
mRNA measurement methods	RT-qPCR	RT-qPCR	RT-qPCR	RT-qPCR	RT-qPCR
Cell analysis methods	Caspase-3 activity assay; TUNEL analysis; Annexin V/PI staining; Mitochondrial function assay	LC3-GFP fluorescence reporter assay; Live cell autophagosome staining	Annexin V/PI staining; Mitochondrial function assay; Lactate dehydrogenase (LDH) assay	Caspase-1 activity assay; Lactate dehydrogenase (LDH) assay	C11-BODIPY staining; 4-HNE staining; MDA measurement; GPX activity assay; Reactive oxygen species (ROS) measurement; Glutathione (GSH) measurement; Activity assay for various metabolic enzymes
Microscopic observation methods	Scanning electron microscopy (SEM)	Transmission electron microscopy (TEM)	Live cell imaging; Transmission electron microscopy	Live cell imaging; Transmission electron microscopy	Scanning electron microscopy
Common inhibitors	Z-DEVD-FMK (Caspase-3 Inhibitors); Z-IETD-FMK (Caspase-8 Inhibitors); Z-VDVAD-FMK (Caspase-2 Inhibitors)	MRT68921 HCl (ULK1/2 Inhibitors); 3-Methyladenine (Class III PI 3-kinase Inhibitors); Bafilomycin A1 (H+-ATPase Inhibitors)	Necrostatin-1, 7-Cl-O-Nec-1 (RIPK1 Inhibitors); GSK'872 (RIPK3 Inhibitors); Necrosulfonamide (MLKL Inhibitors)	Ac-YVAD-CMK (Caspase-1/4/5 Inhibitors); INF 4E (Caspase-1 / NLRP3 inflammasome Inhibitors); Disulfiram (Gasdermin D Inhibitors)	Ferrostatin-1,Trolox, Glutathione, Vitamin E, D-PUFAs, BHT, BHA (Lipid peroxidation blockers); DFO, CPX (Iron ion chelators); Zileuton (5-LOX Inhibitors)
Genetic manipulation	Gene knockdown or knockout; Gene overexpression (such as cFLIP, XIAP, CrmA, cIAPs)	Gene knockdown or knockout; Dominant-negative mutant gene overexpression (such as ULK1)	Gene knockdown or knockout; Expression of different splice variants of cFLIP (cFLPs or cFLIPL)	Gene knockdown or knockout	Gene knockdown, knockout, or overexpression

Common Inhibitors

Category	Cat.No.	Name	Cas No.	Function	Physical properties
Inhibitors for ferroptosis	RM02804	Ferrostatin-1 (Fer-1)	347174-05-4	Erastin-induced ferroptosis inhibitors	A solid
	RM02805	Liproxstatin-1	950455-15-9	Potent ferroptosis inhibitors	A solid
	RM02806	Liproxstatin-1 HCl	950455-15-9 (free base)		A solid
	RM02807	Deferoxamine mesylate	138-14-7	Iron chelators	A solid
	RM02808	Zileuton	111406-87-2	5-Lipoxygenase (5-LOX) inhibitors	A solid
	RM02809	BHT	128-37-0	Inhibitors of iron-dependent cell death	Powder
Inhibitors for apoptosis	RM02810	Z-IETD-FMK	210344-98-2	Caspase-8 inhibitors	Powder
	RM02811	Z-DEVD-FMK	210344-95-9	Caspase-3 inhibitors	A solid
Inhibitors for autophagy	RM02812	3-Methyladenine	5142-23-4	Class III PI3K inhibitors	A solid
	RM02814	Chloroquine diphosphate	50-63-5	Autophagy inhibitors	A solid
Inhibitors for necroptosis	RM02815	Necrostatin-1	4311-88-0	Necroptotic inhibitors targeting RIP1	A solid
	RM02816	Necrosulfonamide	1360614-48-7	MLKL inhibitors	A crystalline solid
Inhibitors for pyroptosis	RM02817	VX-765	273404-37-8	Caspase-1 selective inhibitors	A solid
	RM02818	Z-WEHD-FMK	210345-00-9	Potent, cell-permeable, and irreversible inhibitors of Caspase-1/5	Powder
	RM02819	Bay 11-7821(BAY 11-7082)	19542-67-7	Inhibitors of Gasdermin D (GSDMD) pore formation in liposomes	Powder
	RM02820	Disulfiram	97-77-8	Inhibitors of GSDMD pore formation in human and mouse cells	A solid

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