Product Datasheet

Caspase-3 Antibody - (active/cleaved) NB100-56113

Unit Size: 0.05 ml

Store at -20C. Avoid freeze-thaw cycles.

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Updated 10/23/2024 v.20.1

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NB100-56113

Caspase-3 Antibody - (active/cleaved)

Product Information					
Unit Size	0.05 ml				
Concentration	This product is unpurified. The exact concentration of antibody is not quantifiable.				
Storage	Store at -20C. Avoid freeze-thaw cycles.				
Clonality	Polyclonal				
Preservative	0.05% Sodium Azide				
Isotype	IgG				
Purity	Unpurified				
Buffer	Neat whole antisera				
Target Molecular Weight	31.7 kDa				
Product Description					
Host	Rabbit				
Gene ID	836				
Gene Symbol	CASP3				
Species	Human, Mouse, Rat, Gerbil				
Reactivity Notes	Use in Rat reported in scientific literature (PMID:34597692). Rat reactivity reported in scientific literature (PMID:32818590).				
Immunogen	This Caspase-3 Antibody - (active/cleaved) was developed against catalytically active human caspase-3 protein.				
Product Application Details					
Applications	ns Western Blot, Flow Cytometry, Flow (Intracellular), Immunoblotting, Immunocytochemistry/ Immunofluorescence, Immunohistochemistry, Immunohistochemistry-Frozen, Immunohistochemistry-Paraffin, Immunoprecipitation				
Recommended Dilutions	Western Blot 1:1000-1:2000, Flow Cytometry reported in scientific literature (PMID 28287161), Immunohistochemistry, Immunocytochemistry/ Immunofluorescence reported in scientific literature (PMID 29963272), Immunoprecipitation 1:50-1:200, Immunohistochemistry-Paraffin 1:1000-1:5000, Immunohistochemistry-Frozen reported in scientific literature (PMID 29864441), Immunoblotting reported in scientific literature (PMID 27912032), Flow (Intracellular) reported in scientific literature (PMID 24804954)				
Application Notes	Preferentially detects active caspase-3 (large subunit: ~14-21 kDa, and small subunit: ~10 kDa). However, it may also detect pro-caspase-3 (~32 kDa) in some cell or tissue systems. Nuclear immunostaining of caspase-3 is considered be an indication of active/cleaved caspase-3.				

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Images





Immunohistochemistry-Paraffin: Caspase-3 Antibody - (active/cleaved) [NB100-56113] - Irradiated mouse spleen stained for Active/Cleaved Caspase-3 expression using Caspase-3 Antibody - (active/cleaved) (NB100-56113) at 1:2000. Staining is seen in the nuclei of a subset of the cell population. Caspase-3 expression in the nucleus is considered to be a marker of active/caspase-3 expression and apoptosis. Hematoxylineosin counterstain.

Antidepressants-mediated effect on cellular protein content. HT-22 cells were treated with antidepressants for 48 and 96 h and densitometry analysis of NF- κ B (b), p16 (c), p21 (d), p27 (e), p53 (f), TRF1 (g), TRF2 (h), calnexin (i), NuMa (j), cleaved caspase 3 (k), Bcl-2 (l) was evaluated. Representative Western Blots are presented (a). Bars indicate SD, n = 3, ***/^^p < 0.001, **/^p < 0.01, */^p < 0.05, no indication—no statistical significance (one-way ANOVA and Dunnett's a posteriori test)

Immunohistochemistry: Caspase-3 Antibody - (active/cleaved) [NB100-56113] - Pathology in DOX treated acute & recovery phase mice. Regions of myofiber loss & frank replacement fibrosis were noted, most commonly in atria (A, acute phase), & rarely in ventricles (D, recovery phase). These areas were accompanied by macrophage infiltration (B, E) & myofibroblast proliferation (C) consistent with fibroplasia. Rare myofibers were matrix metalloproteinase 2 (F, recovery phase animal) or caspase-3 positive (G, acute phase animal). Reticulin staining (A, D); Immunohistochemistry: Iba 1(B, E; macrophages), alpha SMA (C), MMP-2 (F) & cleaved caspase -3 (G) Bar = 100µm (A-C); 50µm (D-F); 20µm (G). Image collected & cropped by CiteAb from the following publication (https://pubmed.ncbi.nlm.nih.gov/31263061), licensed under a CC-BY license. Not internally tested by Novus Biologicals.

Western Blot: Caspase-3 Antibody - (active/cleaved) [NB100-56113] -Antidepressants-mediated effect on cellular protein content. HT-22 cells were treated with antidepressants for 48 & 96 h & densitometry analysis of NF- κ B (b), p16 (c), p21 (d), p27 (e), p53 (f), TRF1 (g), TRF2 (h), calnexin (i), NuMa (j), cleaved caspase 3 (k), Bcl-2 (l) was evaluated. Representative Western Blots are presented (a). Bars indicate SD, n = 3, ***/^^^p < 0.001, **/^^p < 0.01, */^p < 0.05, no indication—no statistical significance (one-way ANOVA & Dunnett's a posteriori test) Image collected & cropped by CiteAb from the following publication (https://pubmed.ncbi.nlm.nih.gov/31278507), licensed under a CC-BY license. Not internally tested by Novus Biologicals.





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1	<u>ی</u>	48h				96h
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			+	p-NF-KB (SS kDa)	+	
	==		+	p16 (16 kDa)	-+	
	-		-	p21 (21 kDa)	-	
			+	p27 (27 k0a)	+	
,			+	p53 (59 kDa)	+	
	-		+	TRF1 (60 kDa)	+	
			+	TRF2 (S6 kDa)	-	
			+	calnexin (48 kDa)	-	
	-		-	NuMa (238 kOv)	-	
	-	「新三都会	t=ª	eaved caspase 3 (21, 17 kDa)	3=≠	前面目前的
			+	Bcl-2 (26 kDa)	-	
			-	B -actin	-	





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В Immunocytochemistry/ Immunofluorescence: Caspase-3 Antibody -(active/cleaved) [NB100-56113] - Morphological changes & expression of key apoptosis-related molecules in 4T1 cells after DE-EDCP treatment (A) Morphological changes of 4T1 cells exposed to various concentrations of DE-EDCP for 24h. (B) Immunofluorescence staining for Bcl-2 (green), Bax (green) & cleaved caspase-3 (green) together with DNA staining with DAPI (blue) in 4T1 cells incubated with DE-EDCP or cisplatin (31.25 µM) for 24h, as well as in untreated cells (magnification at x200). (C) mRNA expression of Bcl-2, Bax & caspase-3 quantified by RT-PCR in 4T1 cells after DE-EDCP 24h treatment. DE-EDCP treatment markedly increased the expression of Bax & caspase-3 mRNA & decreased the expression of Bcl-2 mRNA in 4T1 cells. β-actin mRNA was used as an internal control. Data points are represented by the expression ratio & mean±SD fold of control in 4T1 cells. (* Bcl-2-: DE-EDCP vs. untreated p=0.03; DE-EDCP vs. cisplatin p=0.006; cislatin vs. untreated p=0.001; Bax-: DE-EDCP vs. untreated p=0.011; cislatin vs. untreated p=0.009; caspase-3-: DE-EDCP vs. untreated p=0.015; DE-EDCP vs. cisplatin p=0.021) Image collected & cropped by CiteAb from the following publication (https://www.oncotarget.com/lookup/doi/10.18632/oncotarget.25610),

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Publications

Wang S, Liu A, Xu C, Hou J et Al. GLP-1(7-36) protected against oxidative damage and neuronal apoptosis in the hippocampal CA region after traumatic brain injury by regulating ERK5/CREB Mol Biol Rep 2024-02-20 [PMID: 38374452]

Elkattawy HA, Mahmoud SM, Hassan AE et Al. Vagal Stimulation Ameliorates Non-Alcoholic Fatty Liver Disease in Rats Biomedicines 2023-12-08 [PMID: 38137476]

Dragojevi? T, ivkovi? E, Dikli? M et Al. Hydroxyurea inhibits proliferation and stimulates apoptosis through inducible nitric oxide synthase in erythroid cells Biomed Pharmacother 2024-11-29 [PMID: 39615166]

Kaur, B;Miglioranza Scavuzzi, B;Yang, M;Yao, J;Jia, L;Abcouwer, SF;Zacks, DN; ER Stress and Mitochondrial Perturbations Regulate Cell Death in Retinal Detachment: Exploring the Role of HIF1? Investigative ophthalmology & visual science 2024-09-03 [PMID: 39325470]

Enes Akkaya, Şevket Evran, Fatih Çalış, Serdar Çevik, Salim Katar, Ersin Karataş, Abdurrahim Koçyiğit, Mustafa Yasin Sağlam, Mustafa Aziz Hatiboğlu, Hakan Hanımoğlu, Mehmet Yaşar Kaynar Thymoquinone ameliorates delayed cerebral injury and cerebral vasospasm secondary to experimental subarachnoid haemorrhage. Neurologia i neurochirurgia polska 2021-01-07 [PMID: 33252137]

H Xiong, Z Ni, J He, S Jiang, X Li, J He, W Gong, L Zheng, S Chen, B Li, N Zhang, X Lyu, G Huang, B Chen, Y Zhang, F He LncRNA HULC triggers autophagy via stabilizing Sirt1 and attenuates the chemosensitivity of HCC cells. Oncogene 2017-09-15 [PMID: 28166203]

Mustafa Ahmed Abdel-Reheim, Merhan E. Ali, Ahmed Gaafar A. Gaafar, Ahmed Amine Ashour Quillaja saponin mitigates methotrexate-provoked renal injury; insight into Nrf-2/Keap-1 pathway modulation with suppression of oxidative stress and inflammation Journal of Pharmaceutical Health Care and Sciences 2024-04-09 [PMID: 38594773]

Davis JA, Bopp AC, Henwood MK et al. Pharmacological transection of brain-spinal cord communication blocks paininduced hemorrhage and locomotor deficits after spinal cord injury in rats J. Neurotrauma 2020-05-05 [PMID: 32368946]

Chandrakumar S, Santiago Tierno I, Agarwal M et al. Mechanical regulation of retinal vascular inflammation and degeneration in diabetes Diabetes 2023-11-21 [PMID: 37986627] (WB, Mouse)

Wang S, Chang CW, Huang J et al. Gasdermin C sensitizes tumor cells to PARP inhibitor therapy in cancer models The Journal of clinical investigation 2023-10-26 [PMID: 37883181] (WB, Human)

Abdeljalil SM, Wahdan SA, Elghazaly H, Tolba MF Insights into the therapeutic outcomes of trimetazidine/doxorubicin combination in Ehrlich solid-phase carcinoma mouse tumor model Life sciences 2023-06-21 [PMID: 37352914]

Salim E, Mahfouz M, Eltonouby E et al. Based polymer nanoparticles from bee pollen attenuate non-small lung cancer through enhancement of apoptosis and cell cycle arrest in vivo Research Square 2023-05-04 (IHC-P, Mouse)

More publications at <u>http://www.novusbio.com/NB100-56113</u>

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NB7160	Goat anti-Rabbit IgG (H+L) Secondary Antibody [HRP]
NBP2-24891	Rabbit IgG Isotype Control

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