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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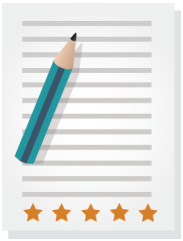
Updated 10/23/2024 v.20.1



NB100-56113

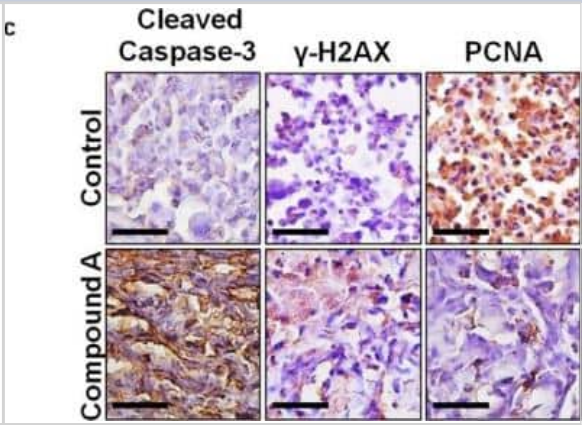
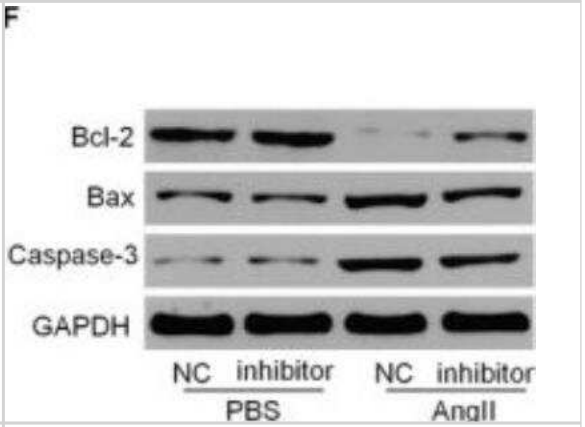
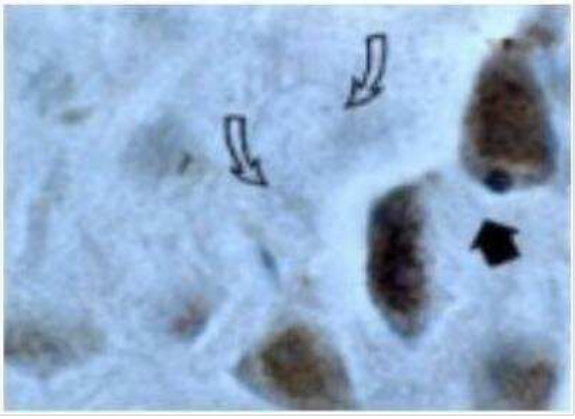
Caspase-3 Antibody - (active/cleaved)

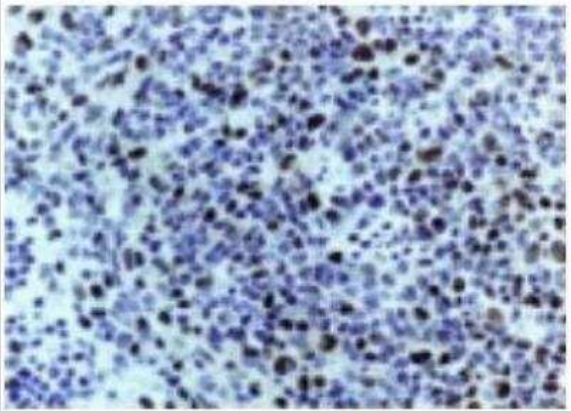
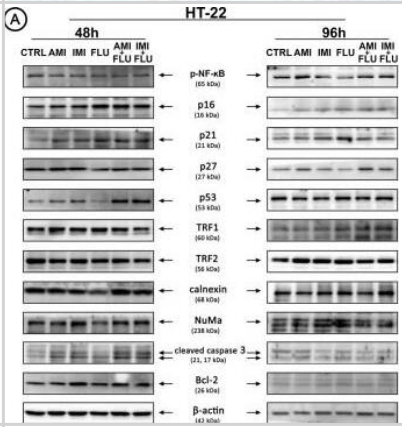
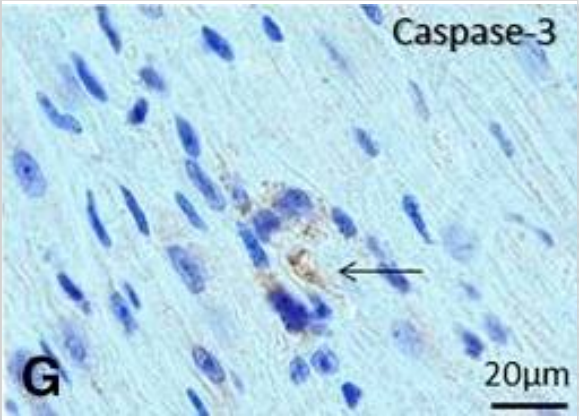
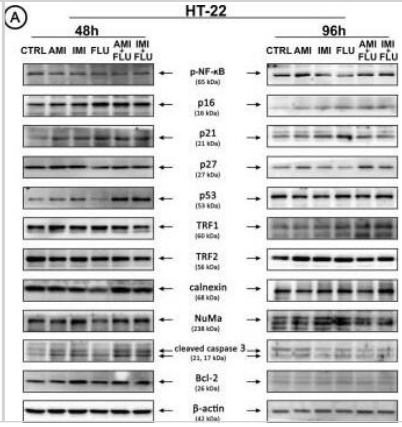
Product Information	
Unit Size	0.05 ml
Concentration	This product is unpurified. The exact concentration of antibody is not quantifiable.
Storage	Store at -20C. Avoid freeze-thaw cycles.
Clonality	Polyclonal
Preservative	0.05% Sodium Azide
Isotype	IgG
Purity	Unpurified
Buffer	Neat whole antisera
Target 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.

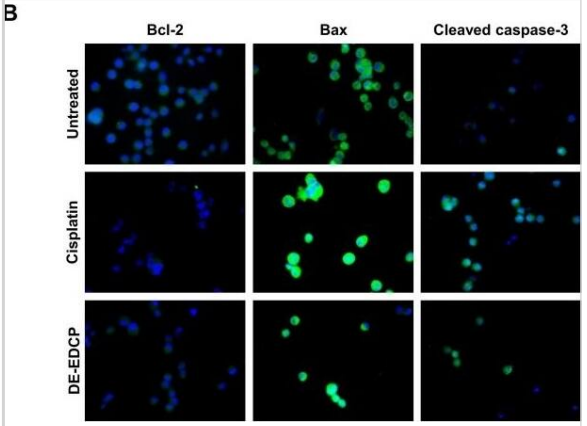
Product Application Details	
Applications	Western Blot, Flow Cytometry, Flow (Intracellular), Immunoblotting, Immunocytochemistry/ Immunofluorescence, Immunohistochemistry, Immunohistochemistry-Frozen, Immunohistochemistry-Paraffin, Immunoprecipitation
Recommended Dilutions	Western Blot 1:1000-1:2000, 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.

Images

Immunohistochemistry: Caspase-3 Antibody - (active/cleaved) [NB100-56113] - Immunohistochemistry analysis of sectioned tumor tissues from the MDA-MB-231 study. Each section was subjected to the specified antibody followed by a biotinylated secondary antibody. Detection was done using a DAB Peroxidase HRP Substrate Kit (brown) followed by Hematoxylin counterstaining (purple). Images were obtained using inverted bright field microscopy. Sectioning results are representative of three individual tumors. Scale bar is 50 microns. Statistical analysis using One-Way ANOVA. *p<0.05 vs tumor volume of the control. Image collected and cropped by CiteAb from the following publication (nature.com/articles/s41598-017-01230-4), licensed under a CC-BY license.	
Western Blot: Caspase-3 Antibody - (active/cleaved) [NB100-56113] - The protein expression levels of Bcl-2, Bax and cleaved caspase-3 were detected in the different groups using Western blotting and were normalized to the housekeeping gene GAPDH. Image collected and cropped by CiteAb from the following publication (onlinelibrary.wiley.com/doi/abs/10.1111/jcmm.14135), licensed under a CC-BY license.	
Western Blot: Caspase-3 Antibody - (active/cleaved) [NB100-56113] - Cell apoptosis was detected by flow cytometric analysis, and the percentage of apoptotic cells transfected with miR-200c inhibitor or NC inhibitor and treated with AngII or PBS for 48 h was determined. Image collected and cropped by CiteAb from the following publication (onlinelibrary.wiley.com/doi/abs/10.1111/jcmm.14135), licensed under a CC-BY license.	
Immunohistochemistry-Paraffin: Caspase-3 Antibody - (active/cleaved) [NB100-56113] - Dog ischemic brain 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 dying neurons (black arrow) but not in the morphologically normal nuclei (open arrows). Caspase-3 expression in the nucleus is considered to be a marker of active/caspase-3 expression and apoptosis. Hematoxylin-eosin counterstain.	

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. Hematoxylin-eosin 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-κB (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-κB (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.	

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), licensed under a CC-BY license. Not internally tested by Novus Biologicals.



Publications

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]

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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]

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Liu D, Tang X, Huang Z et al. Histone deacetylase HDAC2 regulates microRNA-125a expression in neuroblastoma Brain and behavior 2022-01-21 [PMID: 35060363]

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)

Shaalan AK, Teshima THN, Tucker AS, Proctor GB. Inhibition of Aurora Kinase B activity disrupts development and differentiation of salivary glands Cell Death Discovery 2021-01-18 [PMID: 33462217] (Immunohistochemistry)

Silconi ZB, Rosic V, Benazic S et al. The Pt(S-pr-thiosal)2 and BCL1 Leukemia Lymphoma: Antitumor Activity In Vitro and In Vivo International Journal of Molecular Sciences 2022-07-24 [PMID: 35897737]

Albadawy R, Hasanin AH, Agwa SHA et al. Rosavin Ameliorates Hepatic Inflammation and Fibrosis in the NASH Rat Model via Targeting Hepatic Cell Death International Journal of Molecular Sciences 2022-09-05 [PMID: 36077546] (Immunohistochemistry)

Haushalter C, Schuhbaur B, Doll□ P, Rhinn M. Meningeal retinoic acid contributes to neocortical lamination and radial migration during mouse brain development Biology Open 2017-02-15 [PMID: 28011626] (Immunohistochemistry, Immunocytochemistry/ Immunofluorescence)

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NBP2-24891	Rabbit IgG Isotype Control

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