Product Datasheet

Caspase-3 Antibody (31A893) - BSA Free
NB100-56709

Unit Size: 0.1 mg

Store at 4C short term. Aliquot and store at -20C long term. Avoid freeze-thaw cycles.

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Publications: 8

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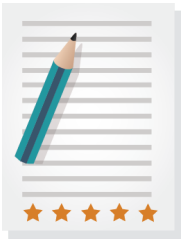
Updated 10/23/2024 v.20.1



NB100-56709

Caspase-3 Antibody (31A893) - BSA Free

Product Information

Unit Size	0.1 mg
Concentration	1.0 mg/ml
Storage	Store at 4C short term. Aliquot and store at -20C long term. Avoid freeze-thaw cycles.
Clonality	Monoclonal
Clone	31A893
Preservative	0.05% Sodium Azide
Isotype	IgG
Purity	Protein G purified
Buffer	PBS
Target Molecular Weight	31.7 kDa

Product Description

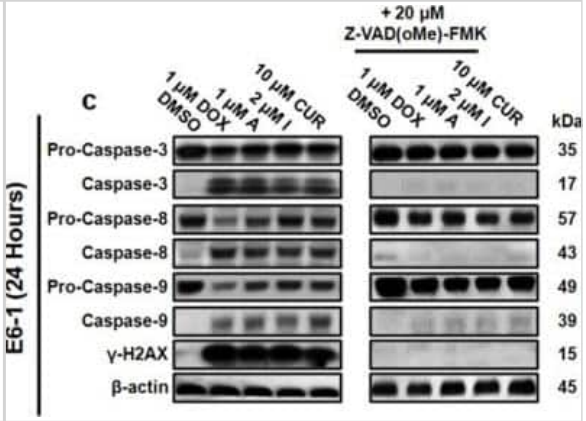
Host	Mouse
Gene ID	836
Gene Symbol	CASP3
Species	Human
Immunogen	This Caspase-3 Antibody (31A893) was developed against recombinant full-length human Caspase-3 protein.

Product Application Details

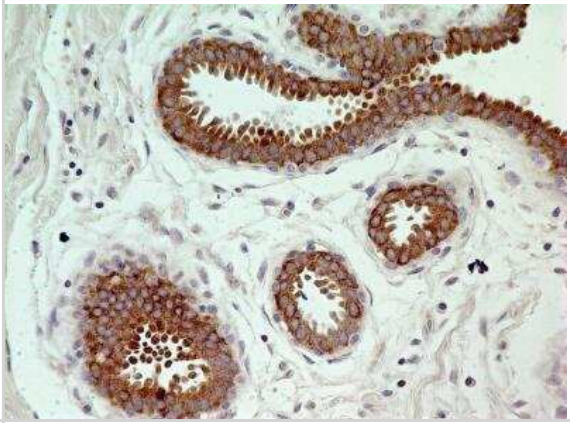
Applications	Western Blot, Immunocytochemistry/ Immunofluorescence, Immunohistochemistry, Immunohistochemistry-Paraffin
Recommended Dilutions	Western Blot 2 ug/ml, Immunohistochemistry 5 ug/mL, Immunocytochemistry/ Immunofluorescence, Immunohistochemistry-Paraffin 5 ug/ml
Application Notes	For IHC-P validation of this target, 1M EDTA pH 9.0 buffer was used for antigen retrieval (citrate buffer pH 6.0 did not work).

Images

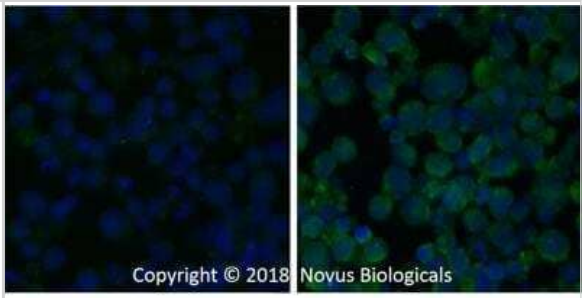
Western Blot: Caspase-3 Antibody (31A893) [NB100-56709] - Curcumin Analogs Induce Apoptosis in Cancerous Cells by Several Pathways. E6-1 cells were treated for 24 hours with or without the broad spectrum caspase inhibitor ZVAD(oMe)-FMK and the studied compounds, lysed and subjected to Western blot analysis. Image collected and cropped by CiteAb from the following publication (https://www.nature.com/articles/s41598-017-01230-4) licensed under a CC-BY license.



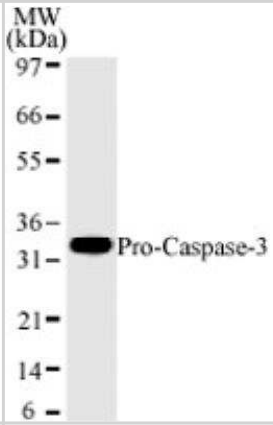
Immunohistochemistry-Paraffin: Caspase-3 Antibody (31A893) [NB100-56709] - Tissue section of normal human breast using 5 ug/mL concentration of . Very strong diffused as well as granular immunopositivity of Caspase 3 was observed specifically in the cytoplasmic of ductal /acinar epithelial cells.



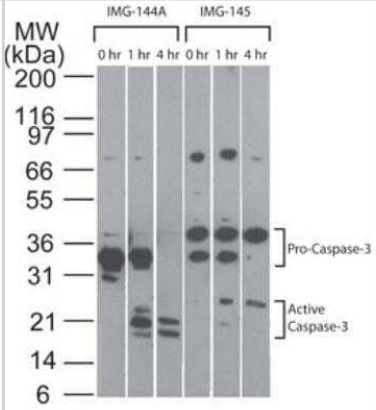
Immunocytochemistry/Immunofluorescence: Caspase-3 Antibody (31A893) [NB100-56709] - Left panel: Untreated Jurkat cells were fixed for 10 minutes using 10% formalin and then permeabilized for 5 minutes using 1X PBS + 0.05% Triton X-100. The cells were incubated with at 10 ug/mL overnight at 4C and detected with an anti-Mouse IgG Dylight 488 (Green) at a 1:500 dilution. Nuclei were counterstained with DAPI (Blue). Cells were imaged using a 40X objective.



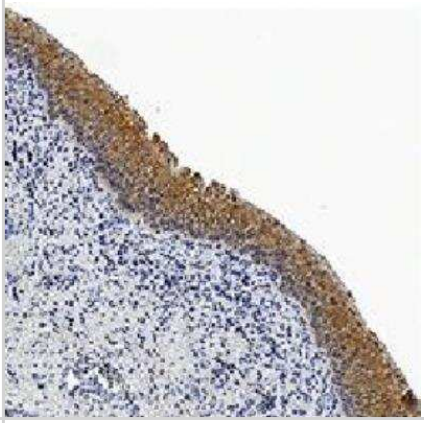
Western Blot: Caspase-3 Antibody (31A893) [NB100-56709] - Analysis for human Caspase-3 using HL60 lysates with Caspase-3 Antibody (31A893) at 2 ug/mL dilution. NB100-56709 only detects a 32 kD Caspase-3 corresponding to pro-Caspase-3.



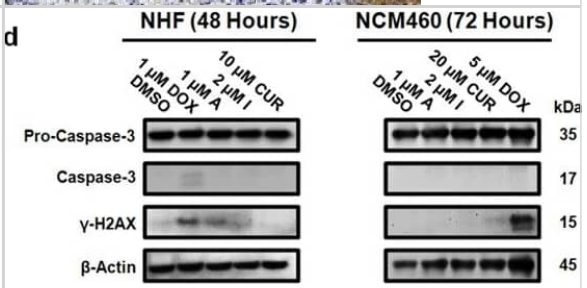
Western Blot: Caspase-3 Antibody (31A893) [NB100-56709] - Analysis of Caspase-3 in Jurkat cells. Cells were treated with 2 uM staurosporine for different time periods. Caspase-3 activation is detected in Western blots by the presence of Caspase-3 cleavage fragments. These antibodies detect both pro (full-length) and active (cleaved) Caspase-3, depending on the treatment time points. A basal level of endogenous active Caspase-3 may be see in untreated Jurkat cells.



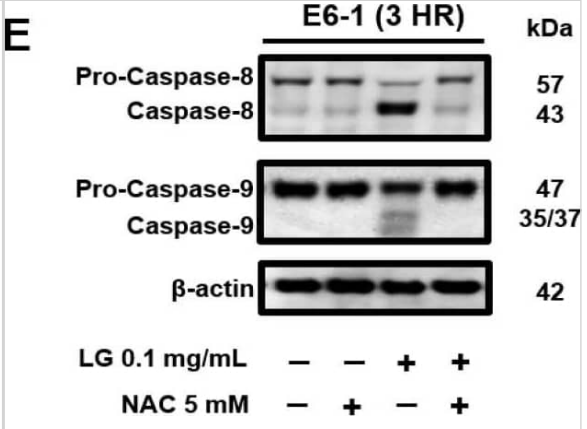
Immunohistochemistry-Paraffin: Caspase-3 Antibody (31A893) [NB100-56709] - Caspase-3 was detected in immersion fixed paraffin-embedded sections of human bladder tissue using 5 ug/mL of mouse monoclonal Caspase-3 Antibody (31A893) (NB100-56709, Novus Biologicals), for 1 hour at room temperature followed by anti-mouse IgG VisUCyte HRP polymer (VC001). Tissue was stained using DAB (brown) and counterstained with hematoxylin (blue).



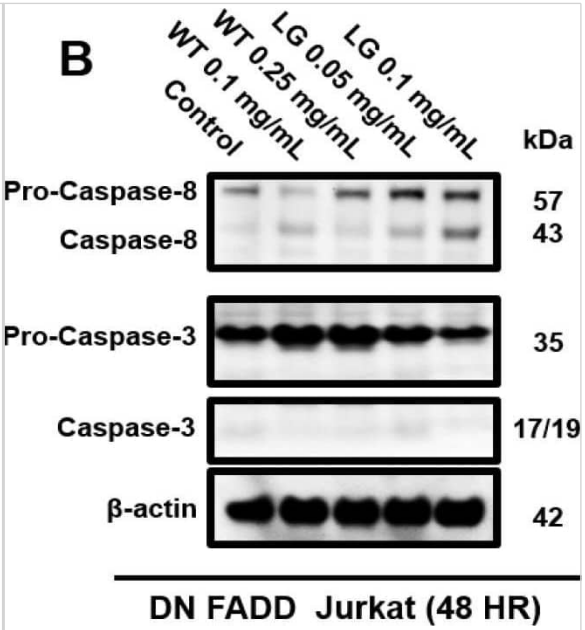
Curcumin Analogs Induce Apoptosis in Cancerous Cells by Several Pathways. (a) E6-1 (Jurkat), dominant negative FADD (dnFADD) Jurkat, & overexpressing BCL-2 Jurkat were treated for 48 hours then stained for Annexin V & PI (b) E6-1 cells were plated & treated with or without the broad spectrum caspase inhibitor ZVAD(oMe)-FMK for 48 hours. Cells were stained for Annexin V & PI. Results were obtained using image-based cytometry with the Y-axis representative of percent of cells positive for Annexin V (green), PI (red), Annexin V & PI (yellow), or negative for both Annexin V & PI (blue). Values are expressed as a mean ± SD from three independent experiments. (c) E6-1 cells were treated for 24 hours with or without the broad spectrum caspase inhibitor ZVAD(oMe)-FMK & the studied compounds, lysed & subjected to Western blot analysis. (d) NHF & NCM460 cells were treated for 48 hours & 72 hours respectively, lysed & subjected to Western blot analysis. Bands were visualized with a chemiluminescence reagent. Images are representative of three independent experiments. Statistical calculations were performed using Two-Way ANOVA multiple comparison. *p < 0.05 vs % viable of Control (DMSO); #p < 0.05 vs % viable cells for groups without Z-VAD(oMe)FMK. Image collected & cropped by CiteAb from the following publication (https://pubmed.ncbi.nlm.nih.gov/28439094), licensed under a CC-BY license. Not internally tested by Novus Biologicals.



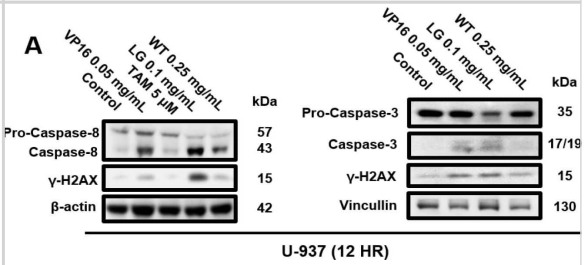
Western Blot: Caspase-3 Antibody (31A893) - BSA Free [NB100-56709] - Lemongrass extract is dependent on the production of oxidative stress to induce apoptosis. (E) E6-1 cells treated for 3 hrs with LG with or without NAC, lysed, & subjected to SDS-PAGE. Cells then transferred to a PVDF membrane & probed for the specific proteins. Bands visualized with a chemiluminescence reagent. Statistical calculations performed using Two-Way ANOVA multiple comparison for (A) & One-Way ANOVA multiple comparison for (B–C). **p < 0.01 vs. Control, ****p < 0.0001 vs. Control. Image collected & cropped by CiteAb from the following publication (https://www.oncotarget.com/lookup/doi/10.18632/oncotarget.22502), licensed under a CC-BY license. Not internally tested by Novus Biologicals.



Western Blot: Caspase-3 Antibody (31A893) - BSA Free [NB100-56709] - Functioning FADD protein is required to induce apoptosis in cancer cells treated with lemongrass extract(A) U-937 & (B) DN FADD Jurkat cells were treated for 12 hours & 48 hours, respectively, with the specified treatments, lysed, & subjected to SDS-PAGE. Cells were then transferred to a PVDF membrane & probed for the specific proteins. Bands were visualized with a chemiluminescence reagent. (C) DN FADD Jurkat cells were treated for 48 hours with the specified doses & stained with Annexin V & PI. Results were obtained using image-based cytometry with the Y-axis representative of percent of cells positive for Annexin V (green), PI (red), Annexin V & PI (yellow), or negative for both Annexin V & PI (blue). Values are expressed as a mean ± SD from three independent experiments. (D) DN FADD Jurkat cells were treated with H2DCFDA following treatments with paraquat (PQ), LG, or WT for 3 hours. Results were obtained using the image-based cytometry with the Y-axis representative of percent of cells positive for DCF. Values are expressed as a mean ± SD from three independent experiments. Statistical calculations were performed using Two-Way ANOVA multiple comparison for (C) & One-Way ANOVA multiple comparison for (D). ***p < 0.001 vs. Control, ****p < 0.0001 vs. Control. Image collected & cropped by CiteAb from the following publication (https://www.oncotarget.com/lookup/doi/10.18632/oncotarget.22502), licensed under a CC-BY license. Not internally tested by Novus Biologicals.



Western Blot: Caspase-3 Antibody (31A893) - BSA Free [NB100-56709] - Functioning FADD protein is required to induce apoptosis in cancer cells treated with lemongrass extract(A) U-937 & (B) DN FADD Jurkat cells were treated for 12 hours & 48 hours, respectively, with the specified treatments, lysed, & subjected to SDS-PAGE. Cells were then transferred to a PVDF membrane & probed for the specific proteins. Bands were visualized with a chemiluminescence reagent. (C) DN FADD Jurkat cells were treated for 48 hours with the specified doses & stained with Annexin V & PI. Results were obtained using image-based cytometry with the Y-axis representative of percent of cells positive for Annexin V (green), PI (red), Annexin V & PI (yellow), or negative for both Annexin V & PI (blue). Values are expressed as a mean ± SD from three independent experiments. (D) DN FADD Jurkat cells were treated with H2DCFDA following treatments with paraquat (PQ), LG, or WT for 3 hours. Results were obtained using the image-based cytometry with the Y-axis representative of percent of cells positive for DCF. Values are expressed as a mean ± SD from three independent experiments. Statistical calculations were performed using Two-Way ANOVA multiple comparison for (C) & One-Way ANOVA multiple comparison for (D). ***p < 0.001 vs. Control, ****p < 0.0001 vs. Control. Image collected & cropped by CiteAb from the following publication (https://www.oncotarget.com/lookup/doi/10.18632/oncotarget.22502), licensed under a CC-BY license. Not internally tested by Novus Biologicals.



Publications

Mendez-Callejas G, Torrenegra R, MuNoz D et al. A New Flavanone from Chromolaena tacotana (Klatt) R. M. King and H. Rob, Promotes Apoptosis in Human Breast Cancer Cells by Downregulating Antiapoptotic Proteins Molecules 2022-12-21 [PMID: 36615253] (WB, Human)

Philion C, Ma D, Ruvinov I et al. Cymbopogon citratus and Camellia sinensis extracts selectively induce apoptosis in cancer cells and reduce growth of lymphoma xenografts in vivo. Oncotarget 2017-11-18 [PMID: 29340014] (WB)

Ma D, Gilbert T, Pignanelli C et al. Exploiting mitochondrial and oxidative vulnerabilities with a synthetic analog of pancratistatin in combination with piperlongumine for cancer therapy FASEB J. 2017-09-19 [PMID: 28928246] (WB, Human)

Pignanelli C, Ma D, Noel M et al. Selective Targeting of Cancer Cells by Oxidative Vulnerabilities with Novel Curcumin Analogs. Sci Rep 2017-04-24 [PMID: 28439094] (WB, Human)

Wang WT, Chen YH, Hsu JL et al. Terfenadine induces anti-proliferative and apoptotic activities in human hormone-refractory prostate cancer through histamine receptor-independent Mcl-1 cleavage and Bak up-regulation. Naunyn Schmiedebergs Arch. Pharmacol. 2014-01-01 [PMID: 24048439] (WB, Human)

Details:
PC3 human prostate cancer cells, Fig 4a. Terfenadine treatment induced time-dependent caspase-3 cleavage.

Hsiao CJ, Li TK, Chan YL et al. WRC-213, an l-methionine-conjugated mitoxantrone derivative, displays anticancer activity with reduced cardiotoxicity and drug resistance: identification of topoisomerase II inhibition and apoptotic machinery in prostate cancers. Biochem Pharmacol. 2008-02-15 [PMID: 18035333] (WB, Human)

Details:
WB (human androgen-independent prostate cancer PC-3 cells), Fig. 5B.

Chen JY, Chi CW, Chen HL et al. TNF-alpha renders human peritoneal mesothelial cells sensitive to anti-Fas antibody-induced apoptosis. Nephrol Dial Transplant. 2003-09-01 [PMID: 12937219]

Schultz CR, Golembieski WA, King DA et al. Inhibition of HSP27 alone or in combination with pAKT inhibition as therapeutic approaches to target SPARC-induced glioma cell survival. Mol Cancer. 2012-04-05 [PMID: 22480225]

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Products Related to NB100-56709

NBP3-11853	Jurkat Staurosporine Treated / Untreated Cell Lysate
HAF007	Goat anti-Mouse IgG Secondary Antibody [HRP]
NB720-B	Rabbit anti-Mouse IgG (H+L) Secondary Antibody [Biotin]
NBP1-97019-5mg	Mouse IgG Isotype Control

Limitations

This product is for research use only and is not approved for use in humans or in clinical diagnosis. Primary Antibodies are guaranteed for 1 year from date of receipt.

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