

# Product Datasheet

## Caspase-3 Antibody (31A1067) - (Pro and Active) - Azide and BSA Free NBP2-33244

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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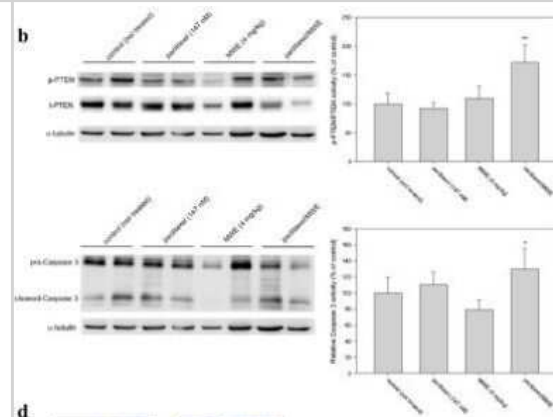
**NBP2-33244**

Caspase-3 Antibody (31A1067) - (Pro and Active) - Azide and BSA Free

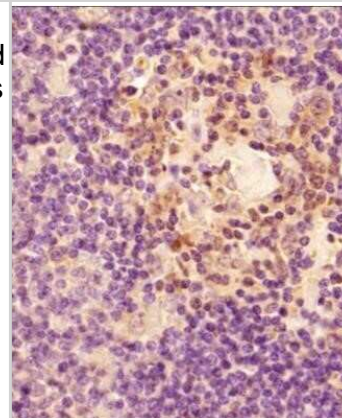
<b>Product Information</b>	
<b>Unit Size</b>	0.1 mg
<b>Concentration</b>	Please see the vial label for concentration. If unlisted please contact technical services.
<b>Storage</b>	Store at 4C short term. Aliquot and store at -20C long term. Avoid freeze-thaw cycles.
<b>Clonality</b>	Monoclonal
<b>Clone</b>	31A1067
<b>Preservative</b>	No Preservative
<b>Isotype</b>	IgG1 Kappa
<b>Purity</b>	Protein G purified
<b>Buffer</b>	PBS - BSA free
<b>Target Molecular Weight</b>	31.7 kDa
<b>Product Description</b>	
<b>Host</b>	Mouse
<b>Gene ID</b>	836
<b>Gene Symbol</b>	CASP3
<b>Species</b>	Human, Mouse, Rat, Porcine, Chicken, Chinese Hamster, Mammal
<b>Specificity/Sensitivity</b>	The antibody detects both pro Caspase-3 (~32 kDa) and the large subunit of the active/cleaved form (~14-21 kDa) of Caspase-3.
<b>Immunogen</b>	This Caspase-3 Antibody (31A1067) - (Pro and Active) - Azide and BSA Free was developed against full-length recombinant human caspase-3 protein.
<b>Product Application Details</b>	
<b>Applications</b>	Western Blot, Simple Western, Flow Cytometry, Immunocytochemistry/ Immunofluorescence, Immunohistochemistry, Immunohistochemistry-Frozen, Immunohistochemistry-Paraffin, Knockdown Validated, Knockout Validated
<b>Recommended Dilutions</b>	Western Blot 1-5 ug/ml, Simple Western, Flow Cytometry, Immunohistochemistry 1:10-1:500, Immunocytochemistry/ Immunofluorescence reported in scientific literature (PMID 23840553), Immunohistochemistry-Paraffin 1:10-1:500. Use reported in scientific literature (Lee et al), Immunohistochemistry-Frozen 1:10-1:500. Use reported in scientific literature (Zhang et al), Knockout Validated, Knockdown Validated
<b>Application Notes</b>	The large subunit of the cleaved form may appear as one or two or even as a stack of bands depending on the presence or absence of the Caspase-3 pro-domain. It is highly recommended that a maximum sensitivity ECL substrate (Femto sensitive) be used for efficient detection of this antibody in Western blot applications.

## Images

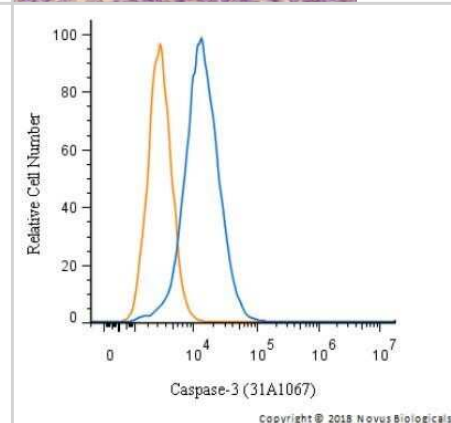
Paclitaxel in combination with MWE retarded tumor growth in a human bladder carcinoma TSGH 8301 xenograft model. The levels of total (t-PTEN) and phospho-PTEN (p-PTEN) and Caspase 3 in the tumor specimens were determined by Western blotting and then quantified using beta-actin as the protein loading control; the results are expressed as a percentage of the control. Image collected and cropped by CiteAb from the following publication (<https://www.nature.com/articles/srep20417>), licensed under a CC-BY license. Image using the standard format of this product.



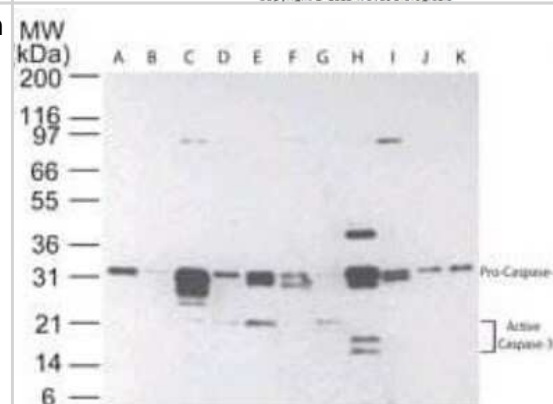
Tissue section of human spleen using 1:200 dilution of Caspase-3 antibody (clone 31A1067). The staining was developed with HRP labeled anti-mouse IgG secondary antibody and DAB reagent, and nuclei of cells were counter-stained with hematoxylin. This Caspase 3 antibody generated primarily a specific cytoplasmic staining in a subset of splenocytes with some nuclear signal in a few cells. Image using the standard format of this product.



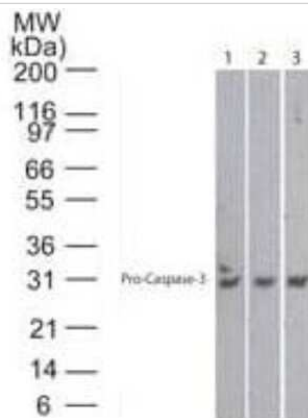
An intracellular stain was performed on HeLa cells with Caspase-3 Antibody (31A1067) - (Pro and Active) NB100-56708 (blue) and a matched isotype control (orange). Cells were fixed with 4% PFA and then permeabilized with 0.1% saponin. Cells were incubated in an antibody dilution of 5 ug/mL for 30 minutes at room temperature, followed by mouse F(ab)2 IgG (H+L) APC-conjugated secondary antibody (F0101B, R&D Systems). Image using the standard format of this product.



Western blot of Caspase-3 in multiple human tissues. The tissues shown are A) brain, B) heart, C) intestine, D) kidney, E) liver, F) lung, G) muscle, H) stomach, I) spleen, J) ovary, and K) testis.



Lanes 1, 2 and 3 demonstrate the species cross-reactivity of the antibody in human, mouse and rat heart lysate, respectively.



Analysis for detection of Caspase-3 activation in HeLa cells. Cells were treated with 2mM staurosporine for different time periods. Caspase-3 activation is determined by cleavage of procaspase-3, which generates 17 and 12kDa, larger and smaller catalytic subunit, respectively.

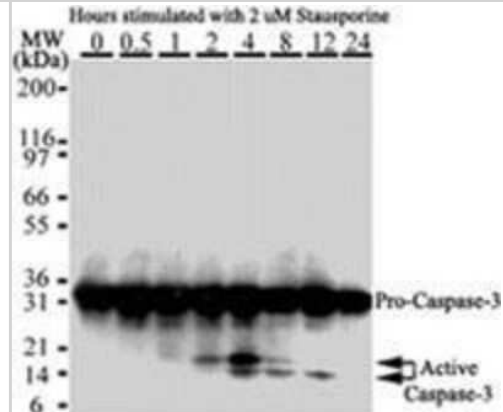
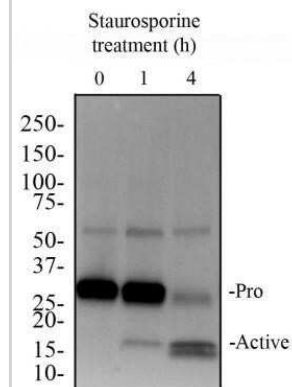
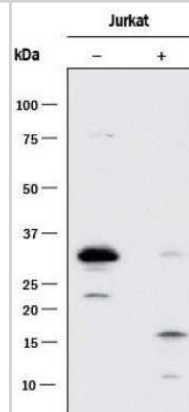


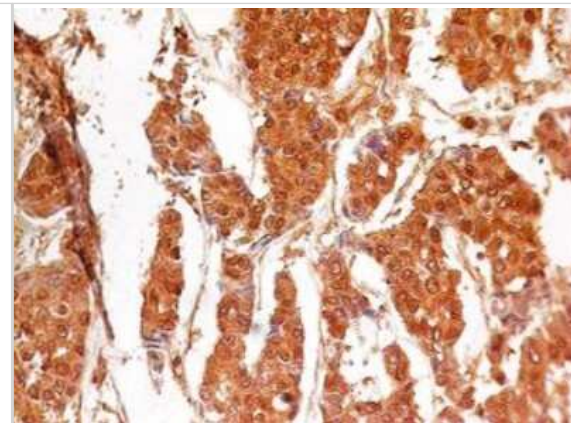
Image of Caspase-3 Antibody (31A1067) - (Pro and Active). Whole cell protein from Jurkat cells treated with and without 2 uM staurosporine as indicated was separated on a 4-15% gel by SDS-PAGE, transferred to 0.2 um PVDF membrane and blocked in 5% non-fat milk in TBST. The membrane was probed with 5 ug/ml anti-Caspase 3 in 1% milk, and detected with an anti-mouse HRP secondary antibody using a Femto sensitivity chemiluminescence reagent. Note the detection of both procaspase 3 at 35 kDa and the cleaved active caspase 3 at 15-17 kDa. Image using the standard format of this product.



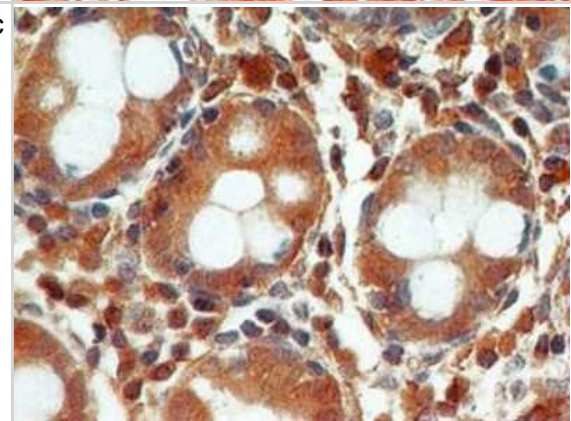
Lysates of Jurkat human acute T cell leukemia cell line untreated (-) or treated (+) with VP-16. PVDF membrane was probed with 0.1 ug/mL of mouse monoclonal Caspase-3 Antibody (31A1067) - (Pro and Active) (NB100-56708, Novus Biologicals) followed by 1:2000 dilution donkey anti-mouse IgG. Image using the standard format of this product.



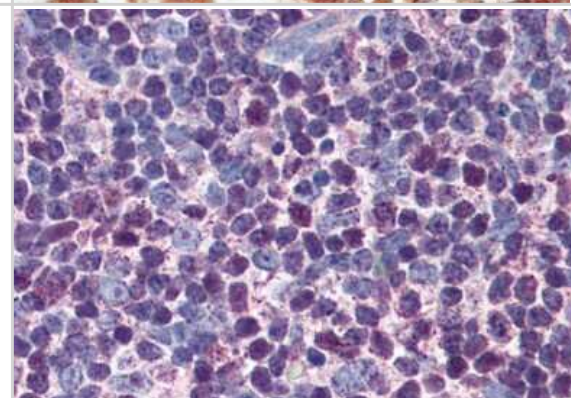
Analysis in human breast cancer stained at 4ug/ml. Localization can be cytoplasmic and nuclear. Staining in the nucleus is considered to be an indication of active Caspase-3. In most cell types and model systems, cells with active Caspase-3 are undergoing apoptosis.



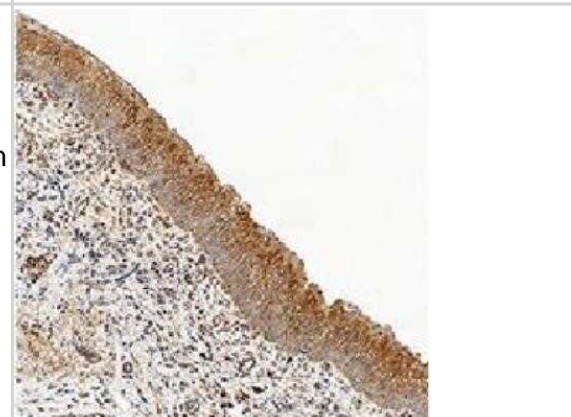
Analysis in normal colon stained 4ug/ml. Localization can be cytoplasmic and nuclear. Staining in the nucleus is considered to be an indication of active Caspase-3. In most cell types and model systems, cells with active Caspase-3 are undergoing apoptosis.



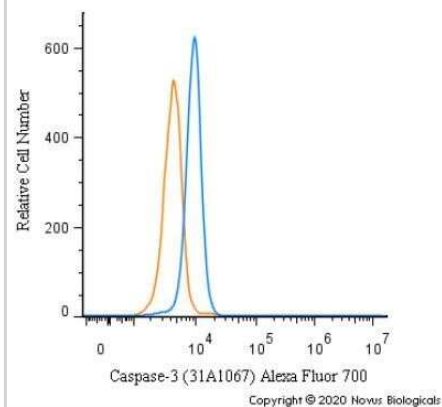
Analysis in the human thymus after heat-induced antigen retrieval at 5 ug/ml.



Caspase-3 was detected in immersion fixed paraffin-embedded sections of human bladder tissue using 1:50 dilution of mouse aCaspase-3 Antibody (31A1067) - (Pro and Active) (NB100-56708), 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). Image using the standard format of this product.



An intracellular stain was performed on NIH3T3 cells with Caspase-3 Antibody (31A1067) - (Pro and Active) Antibody NB100-56708AF700 (blue) and a matched isotype control (orange). Cells were fixed with 4% PFA and then permeabilized with 0.1% saponin. Cells were incubated in an antibody dilution of 10 ug/mL for 30 minutes at room temperature. Both antibodies were directly conjugated to Alexa Fluor 700.



Simple Western lane view shows a specific band for Caspase-3 Antibody (31A1067) - (Pro and Active) in 0.1 mg/ml of HeLa lysate. This experiment was performed under reducing conditions using the 12-230kDa separation system. Image using the standard format of this product.



## Publications

Burgener SS, Leborgne NGF, Snipas SJ et al. Cathepsin G Inhibition by Serpinb1 and Serpinb6 Prevents Programmed Necrosis in Neutrophils and Monocytes and Reduces GSDMD-Driven Inflammation. *Cell Rep.* 2019-06-18 [PMID: 31216481] (Human, Mouse)

Details:

Citation used the Azide and BSA Free format of this antibody.



### **Novus Biologicals USA**

10730 E. Briarwood Avenue  
Centennial, CO 80112  
USA  
Phone: 303.730.1950  
Toll Free: 1.888.506.6887  
Fax: 303.730.1966  
nb-customerservice@bio-techne.com

### **Bio-Techne Canada**

21 Canmotor Ave  
Toronto, ON M8Z 4E6  
Canada  
Phone: 905.827.6400  
Toll Free: 855.668.8722  
Fax: 905.827.6402  
canada.inquires@bio-techne.com

### **Bio-Techne Ltd**

19 Barton Lane  
Abingdon Science Park  
Abingdon, OX14 3NB, United Kingdom  
Phone: (44) (0) 1235 529449  
Free Phone: 0800 37 34 15  
Fax: (44) (0) 1235 533420  
info.EMEA@bio-techne.com

### **General Contact Information**

www.novusbio.com  
Technical Support: nb-technical@bio-techne.com  
Orders: nb-customerservice@bio-techne.com  
General: novus@novusbio.com

### **Products Related to NBP2-33244**

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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]
NBP1-43319-0.5mg	Mouse IgG1 Kappa Isotype Control (P3.6.2.8.1)

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### **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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