

Product datasheet for **TA336456**

Caspase 3 (CASP3) Mouse Monoclonal Antibody [Clone ID: 31A893]

Product data:

Product Type:	Primary Antibodies
Clone Name:	31A893
Applications:	ICC/IF, IHC, WB
Recommended Dilution:	Immunocytochemistry/ Immunofluorescence, Western Blot: 2 ug/ml, Immunohistochemistry: 5 ug/mL, Immunohistochemistry-Paraffin: 5 ug/ml
Reactivity:	Human
Host:	Mouse
Isotype:	IgG
Clonality:	Monoclonal
Immunogen:	A recombinant full-length human Caspase-3 protein was used as the immunogen for this antibody.
Formulation:	PBS containing 0.05% BSA, 0.05% Sodium Azide. Store at 4C short term. Aliquot and store at -20C long term. Avoid freeze-thaw cycles.
Concentration:	lot specific
Purification:	Protein G purified
Conjugation:	Unconjugated
Storage:	Store at -20°C as received.
Stability:	Stable for 12 months from date of receipt.
Gene Name:	caspase 3
Database Link:	NP_116786 Entrez Gene 836 Human P42574



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Background:

This gene encodes a protein which is a member of the cysteine-aspartic acid protease (caspase) family and is a downstream effector cysteine protease in the apoptotic pathway. Caspases are a family of cysteine proteases that are key mediators of programmed cell death or apoptosis. The precursor form of all caspases is composed of a prodomain, and large and small catalytic subunits. The active forms of caspases are generated by several stimuli including ligand-receptor interactions, growth factor deprivation and inhibitors of cellular functions. All known caspases require cleavage adjacent to aspartates to liberate one large and one small subunit, which associate into a2b2 tetramer to form the active enzyme. Gene for Caspase-3 also known as Yama, CPP32, and apopain codes for a 32-kDa protein (2-4). Caspase-3 cleaves the death substrate poly(ADP-ribose) polymerase (PARP) to a specific 85 kDa form observed during apoptosis and is inhibitable by the CrmA protein. Other Caspase-3 substrates include DNA-PK, actin, GAS2, and procaspase-6, etc. Caspase-3 is activated by cleavage events at Asp-28/Ser-29 (between N-terminal pro-domain) and Asp-175/Ser-176 (between large and small subunits) to generate a large subunit of 17-kDa and a small subunit of 12-kDa. The protein is ubiquitously expressed in normal human tissues including the liver, spleen, heart, liver and kidney.

Synonyms:

CPP32; CPP32B; SCA-1

Note:

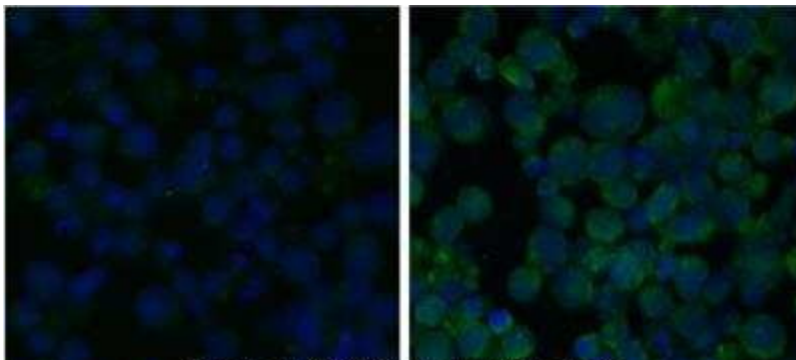
For IHC-P validation of this target, 1M EDTA pH 9.0 buffer was used (citrate buffer ph 6.0 did not work)

Protein Families:

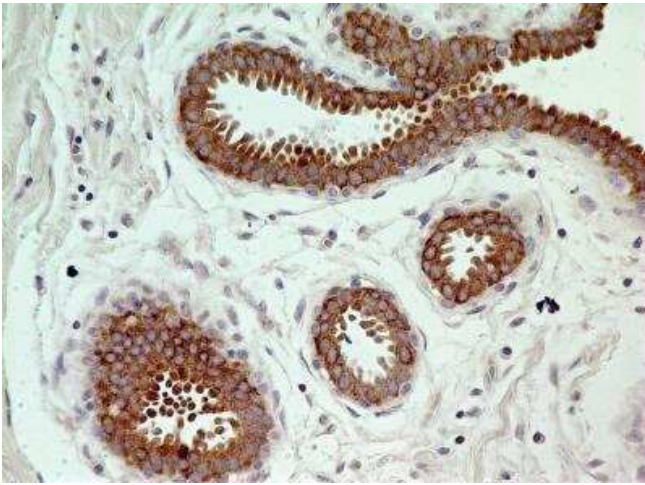
Druggable Genome, ES Cell Differentiation/IPS, Protease

Protein Pathways:

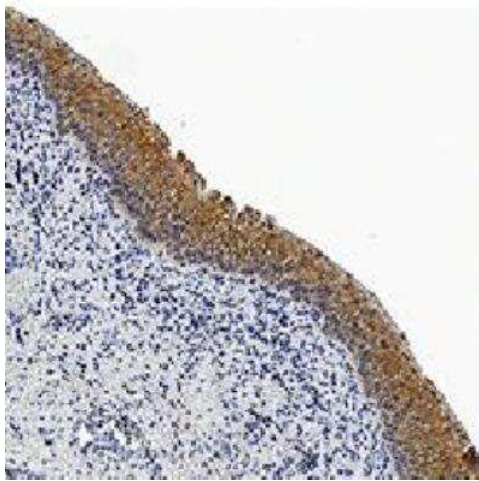
Alzheimer's disease, Amyotrophic lateral sclerosis (ALS), Apoptosis, Colorectal cancer, Epithelial cell signaling in Helicobacter pylori infection, Huntington's disease, MAPK signaling pathway, Natural killer cell mediated cytotoxicity, p53 signaling pathway, Parkinson's disease, Pathways in cancer, Viral myocarditis

Product images:

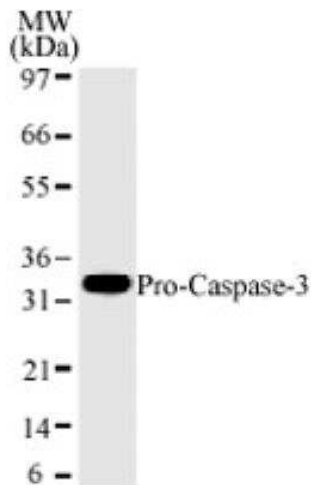
Immunocytochemistry/Immunofluorescence: Caspase-3 Antibody (31A893) TA336456 - Left panel: Untreated Jurkat cells were fixed for 10 minutes using 10% formalin and then permeabilized for 5 minutes using 1X PBS + 0.05% Triton X-100. The cells were incubated with at 10 ug/mL overnight at 4C and detected 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.



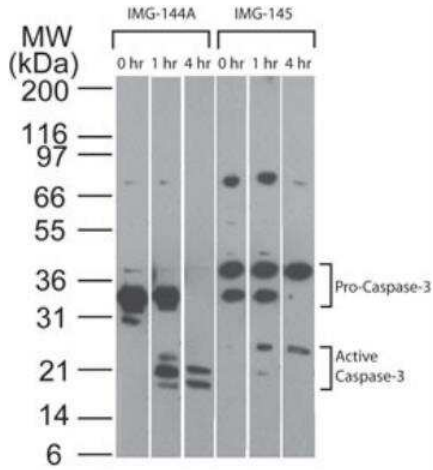
Immunohistochemistry-Paraffin: Caspase-3 Antibody (31A893) TA336456 - Tissue section of normal human breast using 5 ug/mL concentration of . Very strong diffused as well as granular immunopositivity of Caspase 3 was observed specifically in the cytoplasmic of ductal /acinar epithelial cells.



Immunohistochemistry-Paraffin: Caspase-3 Antibody (31A893) TA336456 - 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) (TA336456, 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).



Western Blot: Caspase-3 Antibody (31A893) TA336456 - Analysis for human Caspase-3 using HL60 lysates with Caspase-3 Antibody (31A893) at 2 ug/mL dilution. TA336456 only detects a 32 kD Caspase-3 corresponding to pro-Caspase-3.



Western Blot: Caspase-3 Antibody (31A893) TA336456 - 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 seen in untreated Jurkat cells.