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Product datasheet for TA336323

Caspase 3 (CASP3) Rabbit Polyclonal Antibody

Product data:

Product Type:	Primary Antibodies
Applications:	FC, ICC/IF, IHC, Immunoblotting, IP, WB
Recommended Dilution:	Flow (Intracellular), Immunohistochemistry-Frozen, Flow Cytometry, Immunoblotting, Immunocytochemistry/ Immunofluorescence, Western Blot: 1:1000-1:2000, Immunohistochemistry-Paraffin: 1:1000-1:5000, Immunoprecipitation: 1:50-1:200, Immunohistochemistry
Reactivity:	Human, Mouse, Rat, Canine, Gerbil
Host:	Rabbit
Clonality:	Polyclonal
Immunogen:	Recombinant catalytically active human caspase-3 protein was used as immunogen.
Formulation:	Store at -20C. Avoid freeze-thaw cycles.
Concentration:	lot specific
Purification:	Whole antisera
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 12367 MouseEntrez Gene 25402 RatEntrez Gene 836 Human P42574

View online »

Background: Apoptosis, or programmed cell death, is a common property of all multicellular organisms. The current dogma of apoptosis suggests that the components of the core cell-death machinery are integral to cells and widely conserved across species. Caspases, a family of cysteinyl aspartate-specific proteases, are integral components of the cell death machinery (reviewed in Siegal, 2006; and Lavrik et al, 2005). They play a central role in the initiation and execution of apoptotic cell death and in inflammation. Caspases are typically divided into 3 major groups, depending on the structure of their prodomain and their function. Group 1: inflammatory caspases (caspases 1, 4, 5, 11, 12, 14). Group II: initiator of apoptosis caspases (caspases 2, 8, 9). Group II: effector caspases (caspases 3, 6, 7). Caspases are synthesized as zymogens (inactive pro enzyme precursors which require a biochemical change to become active enzymes) with an N-terminal prodomain of variable length followed by a large subunit (p20) and a small subunit (p10). Caspases are activated through proteolytic cleavage at specific asparagine residues that are located within the prodomain, the p10, and p20 subunits. Activation results in the generation of mature active caspases that consist of the heterotetramer p20-p10. Active caspases mediate cell death and inflammation through cleavage of particular cellular substrates that are involved in these processes. The Active/Cleaved Caspase-3 polyclonal antisera recognizes the large (~14-21 kDa) and small (~10 kDa) subunits of active/cleaved caspase-3. Whereas the antisera has a strong preference for active/cleaved caspase-3, in some cell or tissue systems or techniques the antisera may also recognize the proform of caspase-3 (~32 kDa).

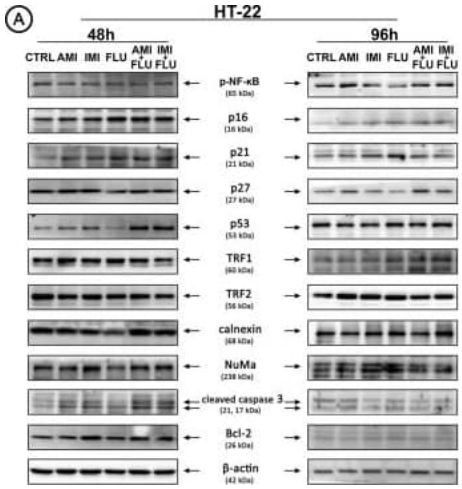
Synonyms: CPP32; CPP32B; SCA-1

Note: 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. Use in Flow Intracellular reported in scientific literature (PMID 24804954)

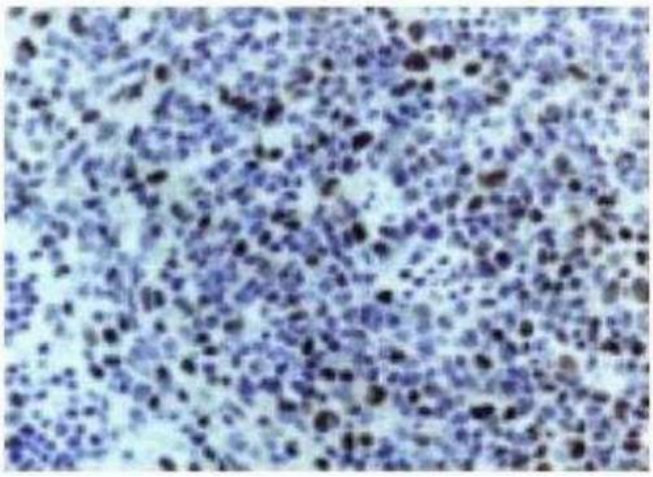
Protein Families: Druggable Genome, ES Cell Differentiation/IPS, Protease

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

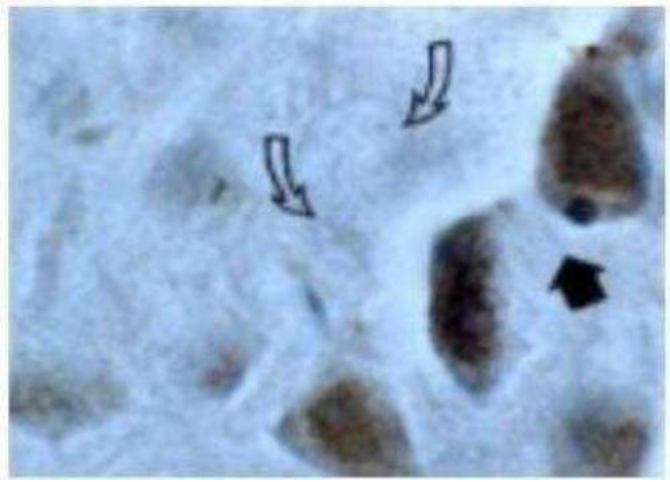
Product images:



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-Paraffin: Caspase-3 Antibody - (active/cleaved) TA336323 - Irradiated mouse spleen stained for Active/Cleaved Caspase-3 expression using Caspase-3 Antibody - (active/cleaved) (TA336323) 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.



Immunohistochemistry-Paraffin: Caspase-3 Antibody - (active/cleaved) TA336323 - Dog ischemic brain stained for Active/Cleaved Caspase-3 expression using Caspase-3 Antibody - (active/cleaved)(TA336323) 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.