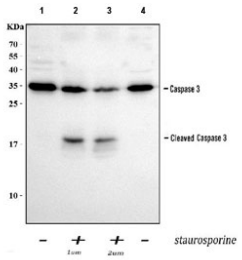
Caspase-3 Antibody (R31602)

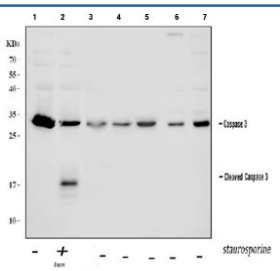
Catalog No.	Formulation	Size
R31602	0.5mg/ml if reconstituted with 0.2ml sterile DI water	100 ug

Bulk quote request

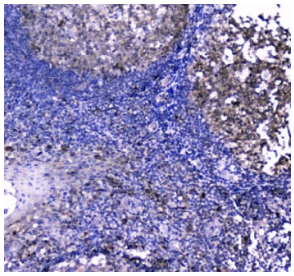
Availability	1-3 business days
Species Reactivity	Human, Mouse, Rat
Format	Antigen affinity purified
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Antigen affinity
Buffer	Lyophilized from 1X PBS with 2% Trehalose and 0.025% sodium azide
Gene ID	836
Localization	Cytoplasmic
Applications	Western Blot : 0.5-1ug/ml Immunohistochemistry (FFPE) : 2-5ug/ml Immunofluorescence : 5ug/ml
Limitations	This Caspase-3 antibody is available for research use only.



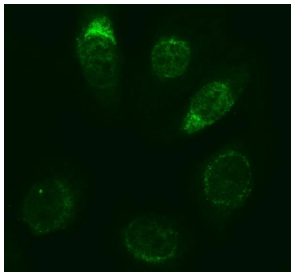
Western blot testing of 1) lysate from untreated human Jurkat cells, 2) lysate from Jurkat cells treated with 1 uM staurosporine, 3) lysate from Jurkat cells treated with 2 uM staurosporine and 4) lysate from untreated human HepG2 cell lysate with Caspase-3 antibody.



Western blot testing of 1) lysate from untreated human Jurkat cells, 2) lysate from Jurkat cells treated with 1 uM staurosporine and untreated 3) rat thymus, 4) rat C6, 5) mouse NIH 3T3, 6) mouse RAW264.7 and 7) mouse ANA-1 cell lysate with Caspase-3 antibody.



IHC staining of FFPE human tonsil tissue with Caspase-3 antibody. HIER: boil tissue sections in pH8 EDTA for 20 min and allow to cool before testing.



Immunofluorescent staining of FFPE human U-2 OS cells with Caspase-3 antibody (green).

Description

Caspase-3 is an enzyme which interacts with Survivin, XIAP, CFLAR, CASP8, HCLS1, Deleted in Colorectal Cancer, TRAF3 and GroEL. This gene which is located on 4q35 encodes a protein that is a member of the cysteine-aspartic acid protease family. Sequential activation of caspases plays a central role in the execution-phase of cell apoptosis. They exist as inactive proenzymes that undergo proteolytic processing at conserved aspartic residues to produce two subunits, large and small, that dimerize to form the active enzyme. CASP3 is the predominant cysteine-aspartic acid protease involved in the cleavage of amyloid-beta 4A precursor protein, which is associated with neuronal death in Alzheimers disease. And protein activation in heart failure sequentially cleaves SRF and generates a truncated SRF that appears to function as a dominant-negative transcription factor. Additionally, the proteins influence on bone mineral density should be considered in any in vivo application of Caspase-3 inhibitors to the treatment of human disease. In erythroid precursors undergoing terminal differentiation, Hsp70 prevents active CASP3 from cleaving GATA1 and inducing apoptosis.

Application Notes

The stated application concentrations are suggested starting points. Titration of the Caspase-3 antibody may be required due to differences in protocols and secondary/substrate sensitivity.

Immunogen

Human partial recombinant protein (AA 67-175) was used as the immunogen for this Caspase-3 antibody. This amino acid sequence is from the large subunit.

Storage

After reconstitution, the Caspase-3 antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.