



Active Caspase-3 Monoclonal Antibody(5E1)

Catalog No	YP-Ab-00121
Isotype	IgG
Reactivity	Human;Mouse;Rat;Chicken
Applications	IF;WB;IP;IHC
Gene Name	CASP3
Immunogen	Recombinant Protein of Active Caspase-3
Specificity	The antibody detects endogenous cleaved Caspase-3 protein p17 isoform.
Formulation	PBS, pH 7.4, containing 0.5%BSA, 0.02% sodium azide as Preservative and 50% Glycerol.
Source	Monoclonal, Mouse
Purification	The antibody was affinity-purified from mouse ascites by affinity-chromatography using epitope-specific immunogen.
Dilution	IF: 1:50-200 WB: 1:500-1000 IHC: 1:100-200
Concentration	1 mg/ml
Purity	≥90%
Storage Stability	-20°C/1 year
Synonyms	CPP32;SCA-1;CPP32B;Active Caspase-3;Caspase-3;CASP3;Caspase3;CASP-3;Apopain;Cysteine protease CPP32;CPP-32;Protein Yama;SREBP cleavage activity 1
Observed Band	17kD
Calculated Molecular Weight	17kD
Cell Pathway	Cytoplasm.
Tissue Specificity	Highly expressed in lung, spleen, heart, liver and kidney. Moderate levels in brain and skeletal muscle, and low in testis. Also found in many cell lines, highest expression in cells of the immune system.
Function	catalytic activity:Strict requirement for an Asp residue at positions P1 and P4. It has a preferred cleavage sequence of Asp-Xaa-Xaa-Asp- - with a hydrophobic amino-acid residue at P2 and a hydrophilic amino-acid residue at P3, although Val or Ala are also accepted at this position.,enzyme regulation:Inhibited by isatin sulfonamides.,function:Involved in the activation cascade of caspases responsible for apoptosis execution. At the onset of apoptosis it proteolytically cleaves poly(ADP-ribose) polymerase (PARP) at a '216-Asp- -Gly-217' bond. Cleaves and activates sterol regulatory element binding proteins (SREBPs)



between the basic helix-loop-helix leucine zipper domain and the membrane attachment domain. Cleaves and activates caspase-6, -7 and -9. Involved in the cleavage of huntingtin.,PTM: Cleavage by granzyme B, caspase-6, caspase-8 and caspase-10 generates the two active subunits. Ad

Background

This gene encodes a protein which is a member of the cysteine-aspartic acid protease (caspase) family. Sequential activation of caspases plays a central role in the execution-phase of cell apoptosis. Caspases exist as inactive proenzymes which undergo proteolytic processing at conserved aspartic residues to produce two subunits, large and small, that dimerize to form the active enzyme. This protein cleaves and activates caspases 6, 7 and 9, and the protein itself is processed by caspases 8, 9 and 10. It is the predominant caspase involved in the cleavage of amyloid-beta 4A precursor protein, which is associated with neuronal death in Alzheimer's disease. Alternative splicing of this gene results in two transcript variants that encode the same protein. [provided by RefSeq, Jul 2008],

matters needing attention

Avoid repeated freezing and thawing!

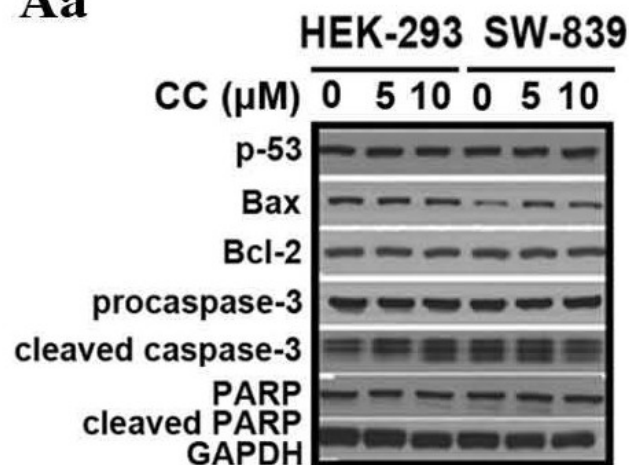
Usage suggestions

This product can be used in immunological reaction related experiments. For more information, please consult technical personnel.

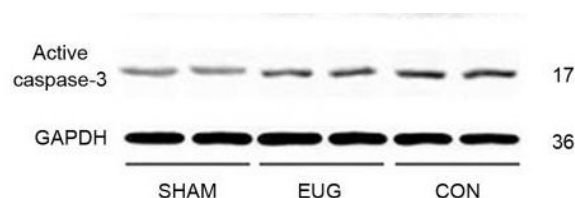


Products Images

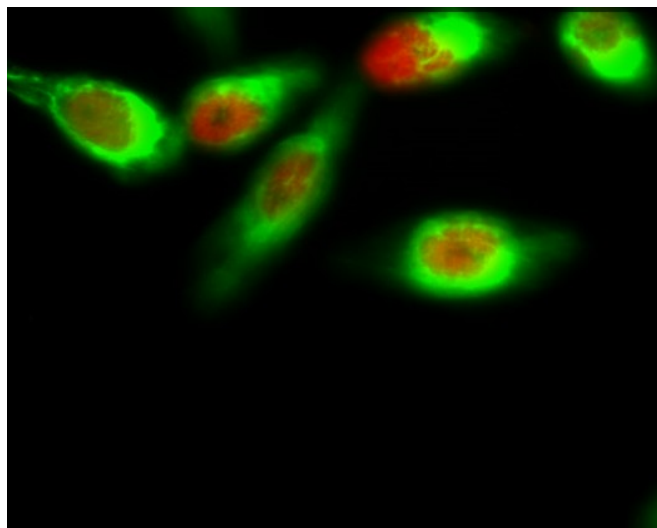
Aa



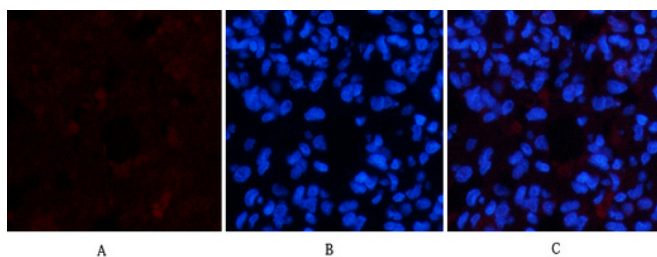
Chen, Xiao Meng, et al. "Chelerythrine chloride induces apoptosis in renal cancer HEK-293 and SW-839 cell lines." *Oncology letters* 11.6 (2016): 3917-3924.



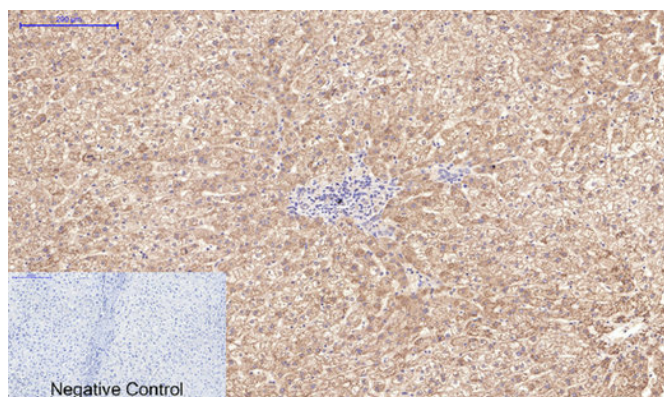
Fen, Wei, et al. "Eugenol protects the transplanted heart against ischemia/reperfusion injury in rats by inhibiting the inflammatory response and apoptosis." *Experimental and therapeutic medicine* 16.4 (2018): 3464-3470.



Immunofluorescence analysis of HeLa cell. 1, FoxO1 (phospho Ser256) Polyclonal Antibody (red) was diluted at 1:200 (4° overnight). Active Caspase-3 Monoclonal Antibody (5E1) (green) was diluted at 1:200 (4° overnight). 2, Goat Anti Rabbit Alexa Fluor 594 Catalog: RS3611 was diluted at 1:1000 (room temperature, 50min). Goat Anti Mouse Alexa Fluor 488 Catalog: RS3208 was diluted at 1:1000 (room temperature, 50min).



Immunofluorescence analysis of rat-lung tissue. 1, Active Caspase-3 Monoclonal Antibody (5E1) (red) was diluted at 1:200 (4°C, overnight). 2, Cy3 labeled Secondary antibody was diluted at 1:300 (room temperature, 50min). 3, Picture B: DAPI (blue) 10min. Picture A: Target. Picture B: DAPI. Picture C: merge of A+B



Immunohistochemical analysis of paraffin-embedded Human-liver tissue. 1, Active Caspase-3 Monoclonal Antibody(5E1) was diluted at 1:200(4°C, overnight). 2, Sodium citrate pH 6.0 was used for antibody retrieval(>98°C, 20min). 3, Secondary antibody was diluted at 1:200(room temperature, 30min). Negative control was used by secondary antibody only.