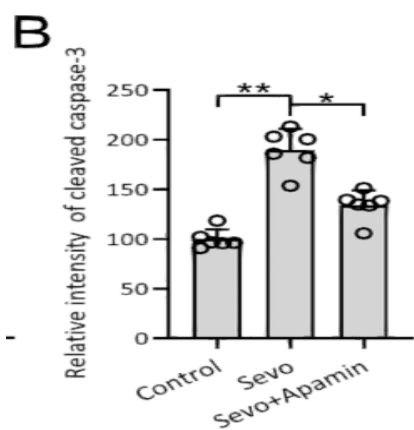


Active Caspase-3 Monoclonal Antibody(5E1)

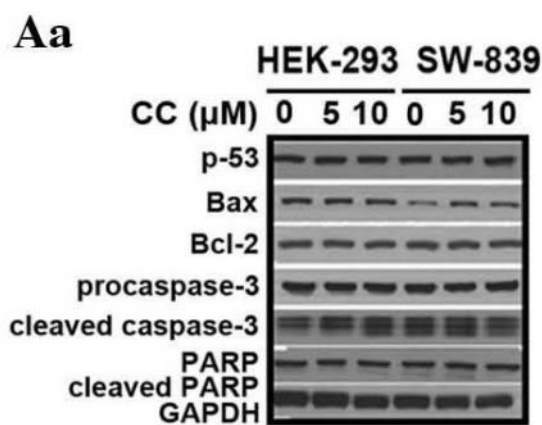
Catalog No :	YM3431
Reactivity :	Human;Mouse;Rat;Chicken
Applications :	IF;WB;IP;IHC
Target :	Caspase-3
Fields :	>>Platinum drug resistance;>>MAPK signaling pathway;>>p53 signaling pathway;>>Apoptosis;>>Apoptosis - multiple species;>>Natural killer cell mediated cytotoxicity;>>IL-17 signaling pathway;>>TNF signaling pathway;>>Serotonergic synapse;>>Non-alcoholic fatty liver disease;>>AGE-RAGE signaling pathway in diabetic complications;>>Alcoholic liver disease;>>Alzheimer disease;>>Parkinson disease;>>Amyotrophic lateral sclerosis;>>Huntington disease;>>Prion disease;>>Pathways of neurodegeneration - multiple diseases;>>Epithelial cell signaling in Helicobacter pylori infection;>>Pathogenic Escherichia coli infection;>>Salmonella infection;>>Pertussis;>>Legionellosis;>>Toxoplasmosis;>>Amoebiasis;>>Tuberculosis;>>Hepatitis C;>>Hepatitis B;>>Measles;>>Human cytomegalovirus infection;>>Influenza A;>>Human papillomavirus infection;>>Kaposi sarcoma-associated herpesvirus infection;>>Herpes simplex virus 1 infection;>>Epstein-Barr virus infection;>>Human immunodeficiency virus 1 infection;>>Pathways i
Gene Name :	CASP3
Protein Name :	Caspase3
Human Gene Id :	836
Human Swiss Prot No :	P42574
Mouse Swiss Prot No :	P70677
Rat Swiss Prot No :	P55213
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
Dilution :	IF 1:50-200 WB 1:500-1000 IHC 1:100-200
Purification :	The antibody was affinity-purified from mouse ascites by affinity-chromatography using epitope-specific immunogen.
Storage Stability :	-15°C to -25°C/1 year(Do not lower than -25°C)
Observed Band :	17kD
Cell Pathway :	MAPK_ERK_Growth;MAPK_G_Protein;p53;Apoptosis_Inhibition;Apoptosis_Mitochondrial;Apoptosis_Overview;Natural killer cell mediated cytotoxicity;Alzheimer's disease;Parkinson's disease;Amyotrophic lateral
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],
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
Subcellular Location :	Cytoplasm.
Expression :	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.

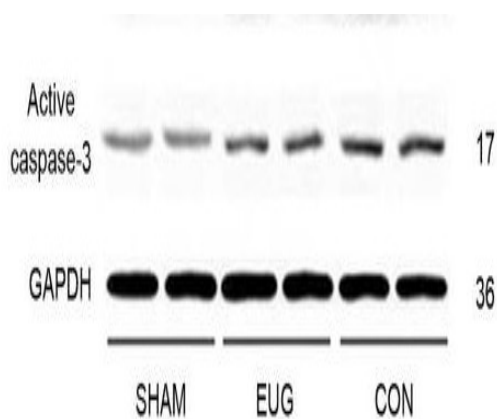
Products Images



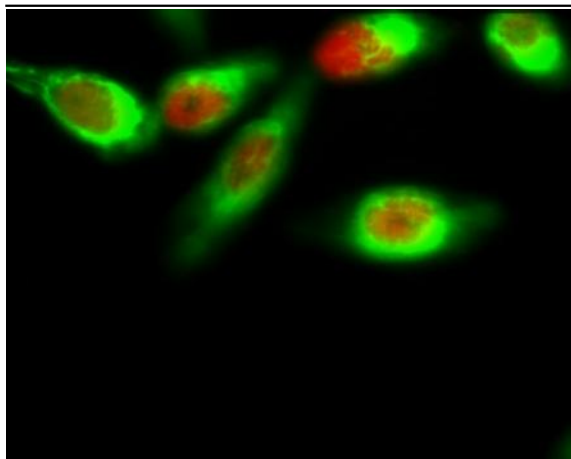
Apamin, an SK2 Inhibitor, Attenuated Neonatal Sevoflurane Exposures Caused Cognitive Deficits in Mice through the Regulation of Hippocampal Neuroinflammation. ACS Chemical Neuroscience Xiangdi Yu IHC Mouse hippocampal



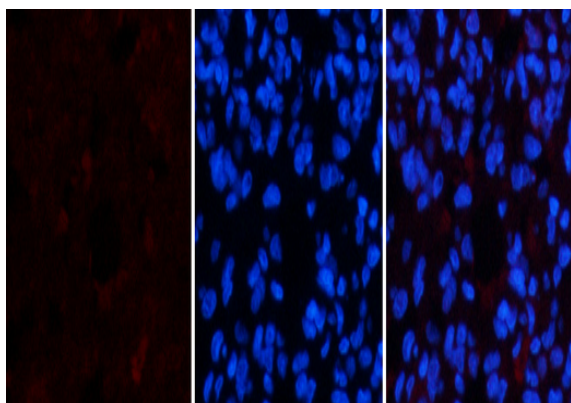
Chen, Xiao-Meng, et al. "Chelerythrine chloride induces apoptosis in renal cancer HEK-293 and SW-839 cell lines." Oncology letters 11.6 (2016): 3917-3924.



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).

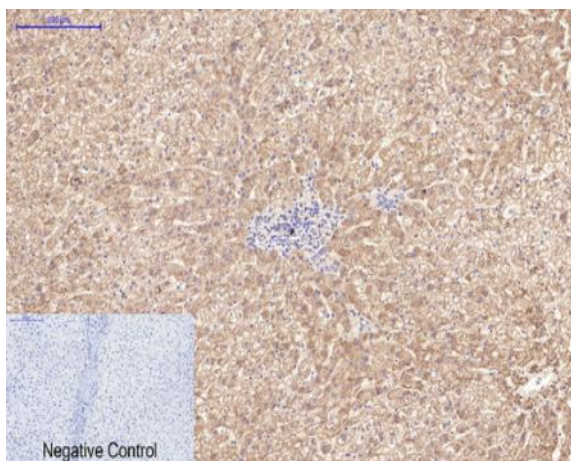


A

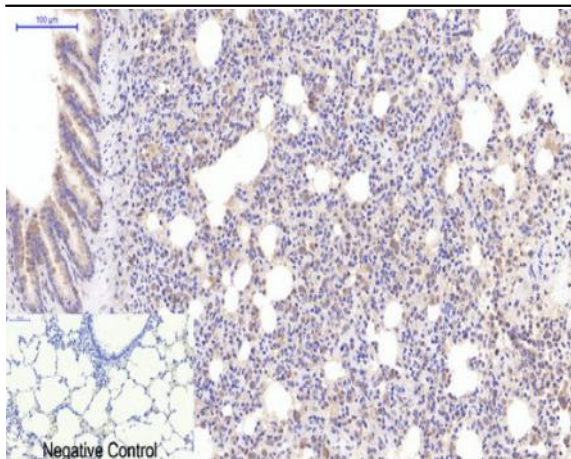
B

C

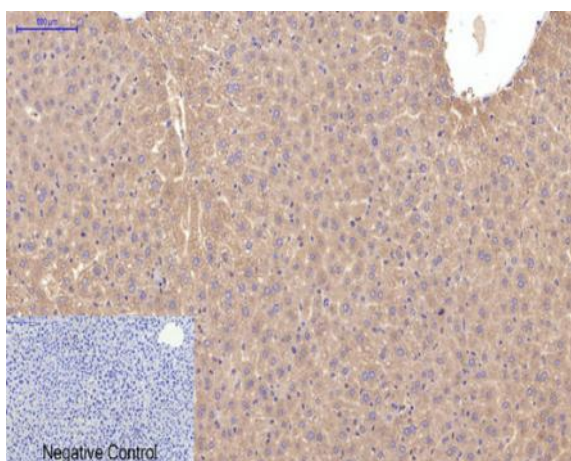
Immunofluorescence analysis of rat-lung tissue. 1, Active Caspase-3 Monoclonal Antibody (5E1) (red) was diluted at 1:200 (4°C, overnight). 2, Cy3 labeled Secondary antibody was diluted at 1:300 (room temperature, 50min). 3, Picture B: DAPI (blue) 10min. Picture A: Target. Picture C: merge of A+B



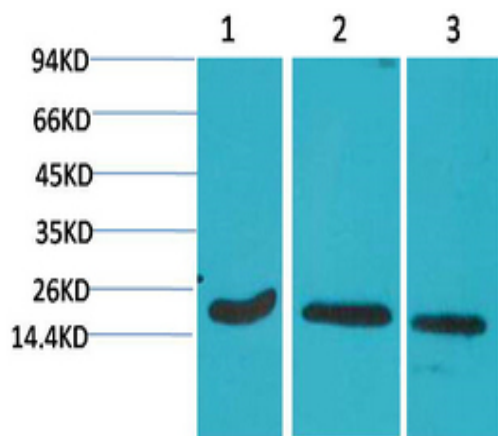
Immunohistochemical analysis of paraffin-embedded Human-liver tissue. 1, Active Caspase-3 Monoclonal Antibody (5E1) was diluted at 1:200 (4°C, overnight). 2, Sodium citrate pH 6.0 was used for antibody retrieval (>98°C, 20min). 3, Secondary antibody was diluted at 1:200 (room temperature, 30min). Negative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



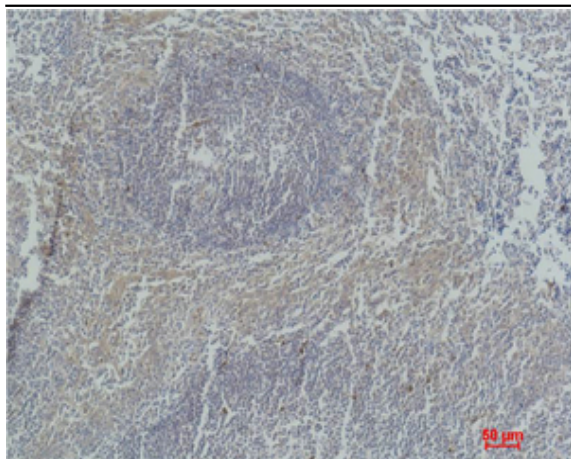
Immunohistochemical analysis of paraffin-embedded Rat-lung tissue. 1, Active Caspase-3 Monoclonal Antibody(5E1) was diluted at 1:200(4 °C, overnight). 2, Sodium citrate pH 6.0 was used for antibody retrieval(>98 °C, 20min). 3, Secondary antibody was diluted at 1:200(room temperature, 30min). Negative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



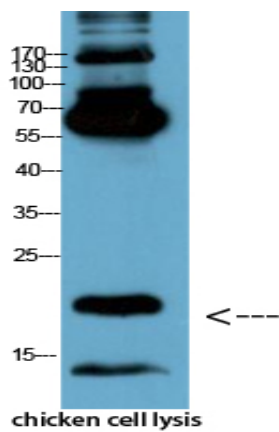
Immunohistochemical analysis of paraffin-embedded Mouse-liver tissue. 1, Active Caspase-3 Monoclonal Antibody(5E1) was diluted at 1:200(4 °C, overnight). 2, Sodium citrate pH 6.0 was used for antibody retrieval(>98 °C, 20min). 3, Secondary antibody was diluted at 1:200(room temperature, 30min). Negative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



Western blot analysis of 1) Hela, 2) 3T3, 3) Rat Brain Tissue using Active Caspase-3 Monoclonal Antibody.



Immunohistochemical analysis of paraffin-embedded Human Tonsil Tissue using Active Caspase-3 Monoclonal Antibody.



Western Blot analysis of chicken cell lysis using Antibody diluted at 1:1000