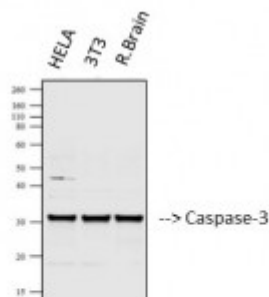


Anti-Active Caspase-3 antibody



Western Blot (WB) analysis of 1. HELA 2. 3T3 3. Rat Brain cells using Active Caspase-3 Monoclonal Antibody, (STJ97448)

Description

Active caspase-3 is a protein encoded by the CASP3 gene which is approximately 31,6 kDa. Active caspase-3 is localised to the cytoplasm. It is involved in the TNFR1 pathway, apoptosis modulation and signalling and respiratory electron transport. This protein falls under the cysteine-aspartic acid protease family. It is a sequential activator of caspases and 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. Active caspase-3 is highly expressed in lung, spleen, heart, liver and kidney. Mutations in the CASP3 gene may result in bladder urothelial carcinoma and primary effusion lymphoma. STJ97448 was affinity-purified from mouse ascites by affinity-chromatography using epitope-specific immunogen. This antibody detects endogenous active caspase-3 protein.

Model	STJ97448
Host	Mouse
Reactivity	Avian, Human, Mouse, Rat
Applications	IF, IHC, WB
Immunogen	Recombinant Protein
Gene ID	836
Gene Symbol	CASP3
Dilution range	WB 1:500-1000IHC 1:100-200
Specificity	The antibody detects endogenous Active Caspase-3 protein.

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.
Purification	The antibody was affinity-purified from mouse ascites by affinity-chromatography using epitope-specific immunogen.
Clone ID	50
Note	For Research Use Only (RUO).
Protein Name	Caspase-3 CASP-3 Apopain Cysteine protease CPP32 CPP-32 Protein Yama SREBP cleavage activity 1 SCA-1 Caspase-3 subunit p17 Caspase-3 subunit p12
Clonality	Monoclonal
Conjugation	Unconjugated
Isotype	IgG1
Formulation	Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% sodium azide.
Storage Instruction	Store at -20°C, and avoid repeat freeze-thaw cycles.
Database Links	HGNC:1504OMIM:600636
Alternative Names	Caspase-3 CASP-3 Apopain Cysteine protease CPP32 CPP-32 Protein Yama SREBP cleavage activity 1 SCA-1 Caspase-3 subunit p17 Caspase-3 subunit p12
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. Triggers cell adhesion in sympathetic neurons through RET cleavage.
Cellular Localization	Cytoplasm.
Post-translational Modifications	Cleavage by granzyme B, caspase-6, caspase-8 and caspase-10 generates the two active subunits. Additional processing of the propeptides is likely due to the autocatalytic activity of the activated protease. Active heterodimers between the small subunit of caspase-7 protease and the large subunit of caspase-3 also occur and vice versa.; S-nitrosylated on its catalytic site cysteine in unstimulated human cell lines and denitrosylated upon activation of the Fas apoptotic pathway, associated with an increase in intracellular caspase activity. Fas therefore activates caspase-3 not only by inducing the cleavage of the caspase zymogen to its active subunits, but also by stimulating the denitrosylation of its active site thiol.