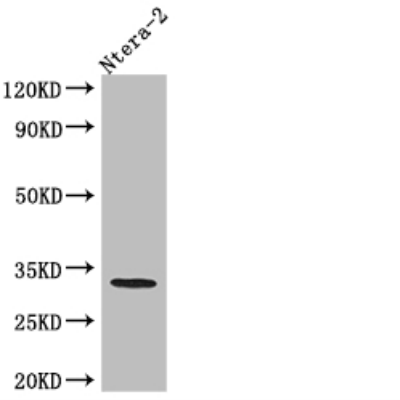
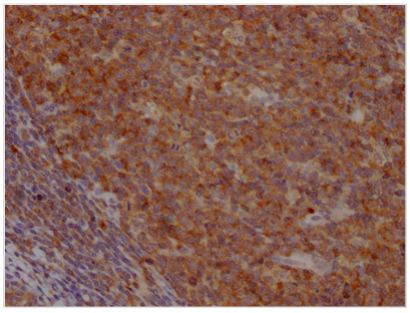
CASP3 Recombinant Monoclonal Antibody

Product Code	CSB-RA833808A0HU
Storage	Upon receipt, store at -20°C or -80°C. Avoid repeated freeze.
Uniprot No.	P42574
Immunogen	A synthesized peptide derived from human pro Caspase 3
Species Reactivity	Human
Tested Applications	ELISA, WB, IHC; Recommended dilution: WB:1:500-1:5000, IHC:1:50-1:200
Relevance	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.
Form	Liquid
Conjugate	Non-conjugated
Storage Buffer	Rabbit IgG in phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.
Purification Method	Affinity-chromatography
Isotype	Rabbit IgG
Clonality	Monoclonal
Product Type	Recombinant Antibody
Immunogen Species	Homo sapiens (Human)
Research Area	Cancer; Cell biology; Metabolism
Gene Names	CASP3
Clone No.	6B2

Image



Western Blot
Positive WB detected in: Ntera-2 whole cell lysate
All lanes: pro Caspase 3 antibody at 1:1000
Secondary
Goat polyclonal to rabbit IgG at 1/50000 dilution
Predicted band size: 32 kDa
Observed band size: 32 kDa



IHC image of CSB-RA833808A0HU diluted at 1:100 and staining in paraffin-embedded human tonsil tissue performed on a Leica BondTM system. After dewaxing and hydration, antigen retrieval was mediated by high pressure in a citrate buffer (pH 6.0). Section was blocked with 10% normal goat serum 30min at RT. Then primary antibody (1% BSA) was incubated at 4? overnight. The primary is detected by a Goat anti-rabbit IgG polymer labeled by HRP and visualized using 0.05% DAB.

Description

Creating the CASP3 recombinant monoclonal antibody is a precise and multi-step process. First, the CASP3 monoclonal antibody is harvested and its gene sequence is determined. Next, a vector carrying the CASP3 monoclonal antibody gene is designed and transfected into a host cell line for culturing. To synthesize the CASP3 monoclonal antibody, a synthesized peptide from human CASP3 is used as an immunogen. The CASP3 recombinant monoclonal antibody is then purified through affinity chromatography to remove any impurities and guarantee high specificity. Finally, its specificity is confirmed through ELISA, WB, and IHC assays to ensure that it accurately recognizes its target. It only detects human CASP3 protein.

CASP3 is a critical enzyme that executes the apoptotic pathway and eliminates unwanted or damaged cells during development, tissue homeostasis, and immune defense. It is also involved in neural development by regulating axonal pruning and synapse elimination. CASP3 participates in regulating the activation and differentiation of immune cells, such as T cells and B cells. Dysregulation of CASP3 can contribute to various diseases, including cancer, neurodegeneration, and autoimmune disorders.