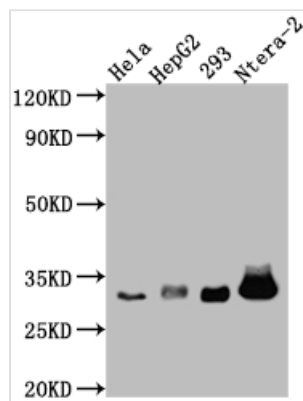




CASP3 Recombinant Monoclonal Antibody

Product Code	CSB-RA286668A0HU
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, IF; Recommended dilution: WB:1:500-1:5000, IHC:1:50-1:200, IF:1:20-1:200
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-I-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.	5B2

Image



Western Blot

Positive WB detected in: HeLa whole cell lysate, HepG2 whole cell lysate, HEK293 whole cell lysate, Ntera-2 whole cell lysate

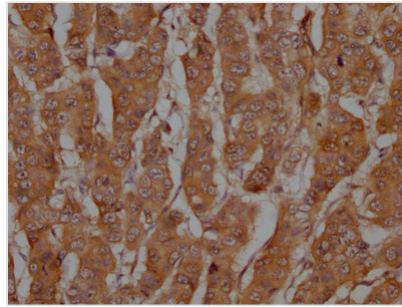
All lanes: pro Caspase 3 antibody at 1:1000

Secondary

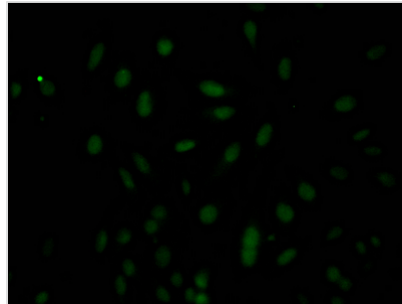
Goat polyclonal to rabbit IgG at 1/50000 dilution

Predicted band size: 32 kDa

Observed band size: 32 kDa



IHC image of CSB-RA286668A0HU diluted at 1:100 and staining in paraffin-embedded human breast cancer performed on a Leica Bond™ 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.



Immunofluorescence staining of Hela Cells with CSB-RA286668A0HU at 1:50, counter-stained with DAPI. The cells were fixed in 4% formaldehyde, permeated by 0.2% TritonX-100, and blocked in 10% normal Goat Serum. The cells were then incubated with the antibody overnight at 4?. Nuclear DNA was labeled in blue with DAPI. The secondary antibody was FITC-conjugated AffiniPure Goat Anti-Rabbit IgG (H+L).

Description

B cells were extracted from the animal immunized with a synthetic peptide derived from human CASP3, followed by fusion with myeloma cells to generate hybridomas. The variable light and variable heavy domains of CASP3 antibody-producing hybridomas were sequenced to construct a vector for a recombinant generation. The CASP3 monoclonal antibody gene-containing vector was then transfected into cells for cultivation, and the CASP3 recombinant monoclonal antibody was isolated and purified from the cell culture supernatant using affinity chromatography. This antibody was tested for the detection of human CASP3 protein in ELISA, WB, IHC, and IF applications.

CASP3 is a protease enzyme that plays a crucial role in apoptosis. Once activated, CASP3 cleaves various cellular substrates, including structural proteins, signaling molecules, and DNA repair enzymes, resulting in the dismantling of the cell and the removal of apoptotic cells by phagocytosis. CASP3 has been shown to be involved in a wide range of physiological and pathological processes, including development, tissue homeostasis, and various diseases, such as cancer and neurodegeneration.