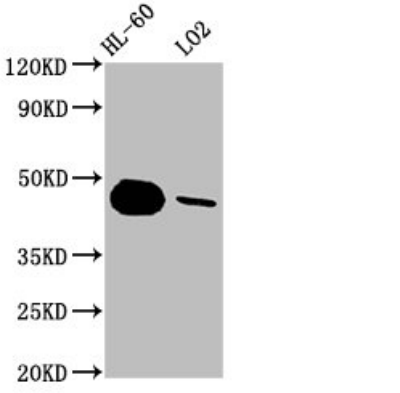
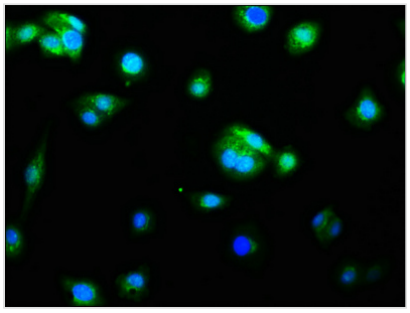
CASP9 Recombinant Monoclonal Antibody

Product Code	CSB-RA004555A0HU
Abbreviation	Caspase-9
Storage	Upon receipt, store at -20°C or -80°C. Avoid repeated freeze.
Uniprot No.	P55211
Immunogen	A synthesized peptide derived from human CASP9
Species Reactivity	Human
Tested Applications	ELISA, WB, IF, FC; Recommended dilution: WB:1:500-1:5000, IF:1:20-1:200
Relevance	Involved in the activation cascade of caspases responsible for apoptosis execution. Binding of caspase-9 to Apaf-1 leads to activation of the protease which then cleaves and activates caspase-3. Promotes DNA damage-induced apoptosis in a ABL1/c-Abl-dependent manner. Proteolytically cleaves poly(ADP-ribose) polymerase (PARP).
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
Alias	Caspase-9, Apoptotic protease Mch-6, Apoptotic protease-activating factor 3, APAF-3, ICE-like apoptotic protease 6, ICE-LAP6, Caspase-9 subunit p35, Caspase-9 subunit p10, CASP9, MCH6
Immunogen Species	Homo sapiens (Human)
Research Area	Cell Biology
Gene Names	CASP9
Clone No.	2D5

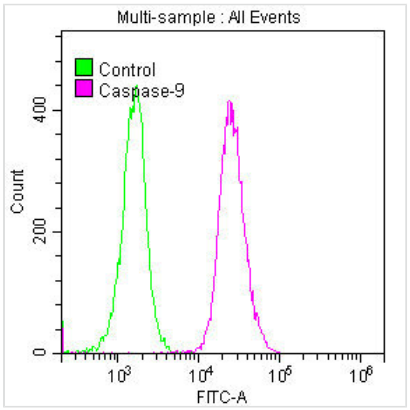
Image



Western Blot
Positive WB detected in: HL-60 whole cell lysate, LO2 whole cell lysate
All lanes: CASP9 antibody at 1.8µg/ml
Secondary
Goat polyclonal to rabbit IgG at 1/50000 dilution
Predicted band size: 47, 31, 18, 37 KDa
Observed band size: 47 KDa



Immunofluorescence staining of HepG2 cells with CSB-RA004555A0HU at 1:60, counter-stained with DAPI. The cells were fixed in 4% formaldehyde, permeabilized using 0.2% Triton X-100 and blocked in 10% normal Goat Serum. The cells were then incubated with the antibody overnight at 4?. The secondary antibody was Alexa Fluor 488-congugated AffiniPure Goat Anti-Rabbit IgG (H+L).



Overlay histogram showing K562 cells stained with CSB-RA004555A0HU (red line) at 1:50. The cells were fixed with 70% Ethylalcohol (18h) and then permeabilized with 0.3% Triton X-100 for 2 min. The cells were then incubated in 1x PBS /10% normal goat serum to block non-specific protein-protein interactions followed by primary antibody for 1 h at 4?. The secondary antibody used was FITC goat anti-rabbit IgG (H+L) at 1/200 dilution for 1 h at 4?. Control antibody (green line) was used under the same conditions. Acquisition of >10,000 events was performed.

Description

The development of the CASP9 recombinant monoclonal antibody involves the utilization of DNA recombinant technology and in vitro genetic manipulation. Initially, animals are immunized with a synthesized peptide derived from human CASP9, which triggers an immune response and allows for the isolation of B cells. After thorough screening and selection, B cells displaying the desired specificity are identified. The genes encoding the light and heavy chains of the CASP9 antibody are then amplified through PCR and inserted into a plasmid vector. This recombinant vector is subsequently introduced into host cells for antibody expression. The CASP9 recombinant monoclonal antibody is purified from the cell culture supernatant using affinity chromatography. This purified antibody exhibits strong affinity and selectivity for human CASP9 protein, enabling its application in ELISA, WB, IF, and FC.

The CASP9 protein plays a crucial role in apoptosis. It is a protease enzyme that is activated in response to signals that initiate the apoptotic process. Once activated, CASP9 cleaves and activates downstream caspases, ultimately leading to the dismantling of the cell. In addition to its role in apoptosis, CASP9 has also been implicated in other cellular processes, such as inflammation and immune response. Dysfunction of CASP9 has been associated with various diseases, including cancer and neurodegenerative disorders.