Anti-Caspase-7 Antibody [PSH13-69]

HA723558

Product Type:	Recombinant Rabbit monoclonal IgG, primary antibodies
Species reactivity:	Human, Mouse, Rat
Applications:	WB, IHC-P
Molecular Wt:	Predicted band size: 34 kDa
Clone number:	PSH13-69

Description: Caspase-7, apoptosis-related cysteine peptidase, also known as CASP7, is a human protein encoded by the CASP7 gene. CASP7 orthologs have been identified in nearly all mammals for which complete genome data are available. Unique orthologs are also present in birds, lizards, lissamphibians, and teleosts. Caspase-7 is a member of the caspase (cysteine aspartate protease) family of proteins, and has been shown to be an executioner protein of apoptosis. Sequential activation of caspases plays a central role in the execution-phase of cell apoptosis. Caspases exist as inactive proenzymes that undergo proteolytic processing by upstream caspases (caspase-8, -9) at conserved aspartic residues to produce two subunits, large and small, that dimerize to form the active enzyme in the form of a heterotetramer. The precursor of this caspase is cleaved by caspase 3, caspase 10, and caspase 9. It is activated upon cell death stimuli and induces apoptosis. Alternative splicing results in four transcript variants, encoding three distinct isoforms.

Immunogen: Recombinant protein within human Caspase-7 aa 1-303.

Positive control: HeLa cell lysate, HeLa treated with 1μM staurosporine for 3 hours cell lysate, C2C12 cell lysate, C2C12 treated with 1μM staurosporine for 3 hours cell lysate, human colon tissue, mouse colon tissue, rat colon tissue.

Subcellular location: Cytoplasm, cytosol, Nucleus, Secreted, extracellular space.

Database links: SwissProt: P55210 Human | P97864 Mouse
Entrez Gene: 64026 Rat

Recommended Dilutions:

WB	1:5,000
IHC-P	1:200-1:1,000

Storage Buffer: 1*PBS (pH7.4), 0.1% BSA, 40% Glycerol, 0.2% Proclean 950.

Storage Instruction: Shipped at 4℃. Store at +4℃ short term (1-2 weeks). It is recommended to aliquot into single-use upon delivery. Store at -20℃ long term.

Purity: Protein A affinity purified.

Images

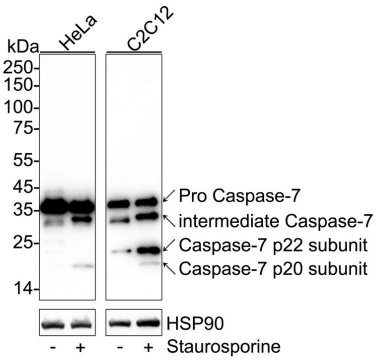

Fig1: Western blot analysis of Caspase-7 on different lysates with Rabbit anti-Caspase-7 antibody (HA723558) at 1/5,000 dilution.

Lane 1: HeLa cell lysate
Lane 2: HeLa treated with 1μM staurosporine for 3 hours cell lysate
Lane 3: C2C12 cell lysate
Lane 4: C2C12 treated with 1μM staurosporine for 3 hours cell lysate

Lysates/proteins at 20 μg/Lane.

Predicted band size: 34 kDa
Observed band size: 34/32/20/18 kDa

Exposure time: 2 minute 30 seconds; ECL: K1801;

4-20% SDS-PAGE gel.

Proteins were transferred to a PVDF membrane and blocked with 5% NFDM/TBST for 1 hour at room temperature. The primary antibody (HA723558) at 1/5,000 dilution was used in primary antibody dilution (K1803) at 4℃ overnight. Goat Anti-Rabbit IgG - HRP Secondary Antibody (HA1001) at 1/50,000 dilution was used for 1 hour at room temperature.

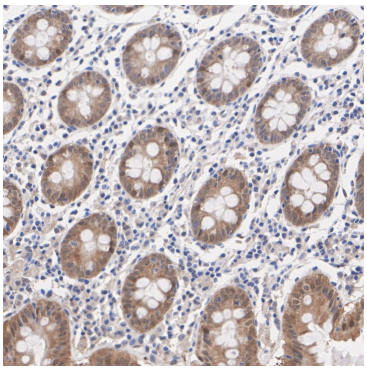

Fig2: Immunohistochemical analysis of paraffin-embedded human colon tissue with Rabbit anti-Caspase-7 antibody (HA723558) at 1/200 dilution.

The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0) for 20 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with ddH_2O and PBS, and then probed with the primary antibody (HA723558) at 1/200 dilution for 1 hour at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

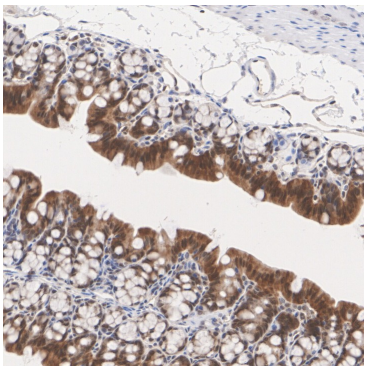

Fig3: Immunohistochemical analysis of paraffin-embedded mouse colon tissue with Rabbit anti-Caspase-7 antibody (HA723558) at 1/1,000 dilution.

The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0) for 20 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with ddH_2O and PBS, and then probed with the primary antibody (HA723558) at 1/1,000 dilution for 1 hour at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

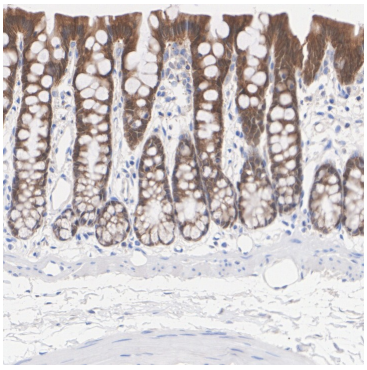

Fig4: Immunohistochemical analysis of paraffin-embedded rat colon tissue with Rabbit anti-Caspase-7 antibody (HA723558) at 1/1,000 dilution.

The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0) for 20 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with ddH_2O and PBS, and then probed with the primary antibody (HA723558) at 1/1,000 dilution for 1 hour at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

Background References

1. Nozaki K et al. Caspase-7 activates ASM to repair gasdermin and perforin pores. Nature. 2022 Jun
2. Li X et al. Apoptotic caspase-7 activation inhibits non-canonical pyroptosis by GSDMB cleavage. Cell Death Differ. 2023 Sep