bsm-61071R **[Primary Antibody]**

Caspase-3 Recombinant Rabbit mAb

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DATASHEET

Host: Rabbit
Isotype: IgG
Clonality: Recombinant
CloneNo.: 4D2
GeneID: 836
SWISS: P42574
Target: Caspase-3
Immunogen: A synthesized peptide derived from human Caspase 3: 176-277/277.
Purification: affinity purified by Protein A
Concentration: 1mg/ml
Storage: 0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
Shipped at 4°C. Store at -20°C for one year. Avoid repeated freeze/thaw cycles.
Background: The caspase family of cysteine proteases play a key role in apoptosis. Caspase 3 is the most extensively studied apoptotic protein among caspase family members. Caspase 3 is synthesized as inactive pro enzyme that is processed in cells undergoing apoptosis by self proteolysis and/or cleavage by other upstream proteases (e.g. Caspases 8, 9 and 10). The processed form of Caspase 3 consists of large (17kDa) and small (12kDa) subunits which associate to form an active enzyme. Caspase 3 is cleaved at Asp28 Ser29 and Asp175 Ser176. The active Caspase 3 proteolytically cleaves and activates other caspases (e.g. Caspases 6, 7 and 9), as well as relevant targets in the cells (e.g. PARP and DFF). Alternative splicing of this gene results in two transcript variants which encode the same protein. In immunohistochemical studies Caspase 3 expression has been shown to be widespread but not present in all cell types (e.g. commonly reported in epithelial cells of skin, renal proximal tubules and collecting ducts). Differences in the level of Caspase 3 have been reported in cells of short lived nature (eg germinal centre B cells) and those that are long lived (eg mantle zone B cells). Caspase 3 is the predominant caspase involved in the cleavage of amyloid beta 4A precursor protein, which is associated with neuronal death in Alzheimer's disease.

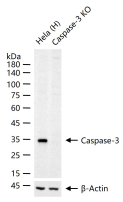
Applications: **WB** (1:1000-2000)
IHC-P (1:100-500)
IHC-F (1:100-500)
IF (1:100-500)

Reactivity: Human, Mouse, Rat

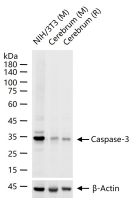
Predicted MW.: 32 kDa

Subcellular Location: Cytoplasm

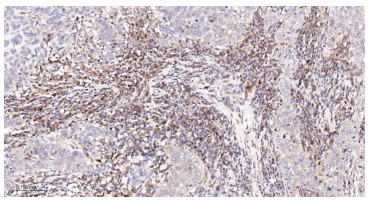
VALIDATION IMAGES



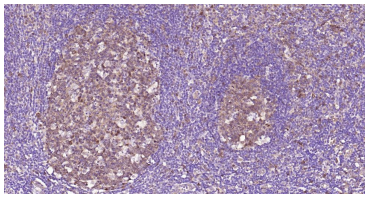
25 ug total protein per lane of various lysates (see on figure) probed with Caspase-3 monoclonal antibody, unconjugated (bsm-61071R) at 1:1000 dilution and 4°C overnight incubation. Followed by conjugated secondary antibody incubation at r.t. for 60 min.



25 ug total protein per lane of various lysates (see on figure) probed with Caspase-3 monoclonal antibody, unconjugated (bsm-61071R) at 1:2000 dilution and 4°C overnight incubation. Followed by conjugated secondary antibody incubation at r.t. for 60 min.



Paraformaldehyde-fixed, paraffin embedded Human Breast Cancer; Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15 min; The section was incubated with Caspase-3 Monoclonal Antibody, Unconjugated (bsm-61071R) at 1:200 overnight at 4°C, followed by conjugation to the bs-0295G-HRP and DAB (C-0010) staining.



Paraformaldehyde-fixed, paraffin embedded Human Tonsil; Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15 min; Antibody incubation with Caspase-3 Monoclonal Antibody, Unconjugated(bsm-61071R) at 1:200 overnight at 4°C, followed by conjugation to the SP Kit(Rabbit, SP-0023) and DAB (C-0010) staining.

SELECTED CITATIONS

- **[IF=17.1]** Lei Liu. et al. Myricetin Oligomer Triggers Multi-Receptor Mediated Penetration and Autophagic Restoration of Blood-Brain Barrier for Ischemic Stroke Treatment. ACS NANO. 2024;XXXX(XXX):XXX-XXX WB,IF ;Mouse,Rat. 38533773
- **[IF=8.1]** Liu Anhong. et al. Zinc ions trigger PANoptosis-like cell death in magnetic hyperthermia therapy of magnesium based implant for hepatocellular carcinoma. APOPTOSIS. 2025 Jun;:1-13 WB ;Mouse. 40537603
- **[IF=3.6]** Yuehong Gong. et al. Roles of Mitochondrial Fusion and Division in Harmine Derivative H-2-168-Induced Neurotoxicity. J IMMUNOL RES. 2025 Jun;2025(1):6678026 IF ;Rat. 40496271
- **[IF=2.2]** Zhufeng Tong. et al. Glycyrrhizin enhances the antitumor activity of cisplatin in non-small cell lung cancer cells by influencing DNA damage and apoptosis. ONCOL LETT. 2025 Apr;29(4):1-10 WB ;Human. 40070780