

**bs-55032R****[ Primary Antibody ]****Caspase-3 Rabbit pAb****Bioss**  
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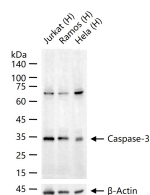
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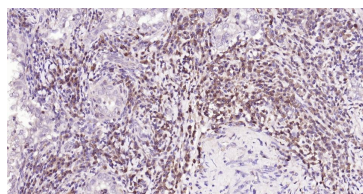
400-901-9800

**— DATASHEET —****Host:** Rabbit**Isotype:** IgG**Clonality:** Polyclonal**GeneID:** 836**SWISS:** P42574**Target:** Caspase-3**Immunogen:** Recombinant human Caspase-3: 55-160/277.**Purification:** affinity purified by Protein A**Concentration:** 1mg/ml**Storage:** 0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.

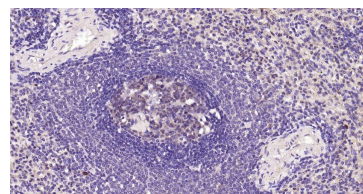
Store at -20°C for one year. Avoid repeated freeze/thaw cycles. The lyophilized antibody is stable at room temperature for at least one month and for greater than a year when kept at -20°C. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4°C.

**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** (1:500-2000)  
**IHC-P** (1:100-500)  
**IHC-F** (1:100-500)  
**IF** (1:100-500)**Reactivity:** Human**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 polyclonal antibody, unconjugated (bs-55032R) at 1:1000 dilution and 4°C overnight incubation. Followed by conjugated secondary antibody incubation at r.t. for 60 min.



Paraformaldehyde-fixed, paraffin embedded Human Cervical Cancer; Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15 min; Antibody incubation with Caspase-3 Polyclonal Antibody, Unconjugated (bs-55032R) at 1:200 overnight at 4°C, followed by conjugation to the SP Kit (Rabbit, SP-0023) and DAB (C-0010) staining.



Paraformaldehyde-fixed, paraffin embedded Human Spleen; Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15 min; Antibody incubation with Caspase-3 Polyclonal Antibody, Unconjugated (bs-55032R) at 1:200 overnight at 4°C, followed by conjugation to the SP Kit (Rabbit, SP-0023) and DAB (C-0010) staining.

## — SELECTED CITATIONS —

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- **[IF=9.6]** Zhanlin Zhang. et al. Piezoelectric Amplification of Cascade Enzymatic Catalysis and Nanomotor Propulsion for Synergistic Electrodynamical-Starvation Tumor Therapy. ADV HEALTHC MATER. 2025 May;;2501280 IHC ;Mouse. 40364626
- **[IF=5.572]** Shaohua Hou. et al. Design, synthesis and biological evaluation of 1H-indazole derivatives as novel ASK1 inhibitors. Eur J Med Chem. 2021 Aug;220:113482 WB ;Human. 33906048
- **[IF=6.208]** Vlasta Demeckova. et al. 5-Fluorouracil Treatment of CT26 Colon Cancer Is Compromised by Combined Therapy with IMMODIN. INT J MOL SCI. 2022 Jan;23(12):6374 IHC ;Mouse. 35742825
- **[IF=5.2]** Yuan Liu. et al. Homotypic membrane-camouflaged camptothecin nanorods combining photothermal and chemotherapy for synergistic antitumor therapy. INT J PHARMACEUT. 2025 Feb;671:125239 IHC ;Mouse. 39837420
- **[IF=5.2]** Alaa Wahba. et al. Afobazole alleviates streptozotocin-induced diabetic nephropathy in rats via hypoglycemic, antioxidant, anti-inflammatory, and anti-apoptotic properties: Role of the S1R/Nrf2 antioxidant axis. life sciences. 2025 Feb 15;363:123410. IHC ;rat. 39842509