

Caspase-3 Recombinant Rabbit Monoclonal Antibody Product Datasheet

Catalog# BX50349

Clone# BP6317

Predicted Molecular Wt: 32kDa
Species Cross-reactivity: Human
Applications: IHC-P

Purity: ProA affinity purified IgG
Form: Liquid
Swissprot ID: P42574

Background:

Caspase-3 is a key executioner cysteine-aspartic protease in the caspase family, essential for mediating apoptosis. It exists as an inactive zymogen (pro-caspase-3) and is activated by proteolytic cleavage via initiator caspases (caspase-8, -9) in response to extrinsic (death receptor) or intrinsic (mitochondrial) apoptotic signals.

Caspase-3 is mainly expressed in tissues with high cellular turnover or apoptotic activity, including immune organs (thymus, spleen, bone marrow), developing tissues (embryonic structures, placenta), epithelia (intestinal mucosa, skin) and glands (mammary, prostate).

Caspase-3, particularly its cleaved active form, serves as a gold-standard biomarker for detecting apoptosis in clinical histopathology. Immunohistochemical (IHC) staining for cleaved Caspase-3 is routinely used to confirm apoptotic activity in tumors post-therapy (chemotherapy/radiotherapy), where activation correlates with treatment efficacy.

Subcellular location:

Cytoplasm and nucleus

Recommended Method:

Heat induced epitope retrieval with Tris-EDTA buffer (pH 9.0), primary antibody incubate at RT (18°C-25°C) for 30 minutes.

Immunogen:

Synthetic peptide. This information is proprietary to BioLynx.

Storage Buffer:

PBS 59%, Sodium azide 0.01%, Glycerol 40%, BSA 0.05%.

Storage Conditions:

-25°C to -18°C

Shipment Instructions:

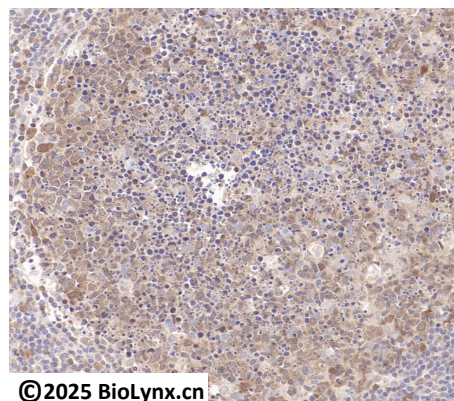
Shipped on blue ice. Upon delivery store at -25°C to -18°C. Avoid freeze / thaw cycles.

Recommended Dilution:

IHC-P: 1:100-1:200

Background References:

- Liu, L. et al. (2024) J Physiol Biochem 80:81-97.
- Zhou, Y. et al. (2024) Inflammation 47:421-437.



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Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of human tonsil labelling Caspase-3 with BP6317.

Product QC'd by:



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