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Anti-Caspase-3 (P10)/CASP3 Antibody Picoband®

Catalog Number: PA1302-1

About CASP3

Caspase 3 is a caspase protein which interacts with Survivin, XIAP, CFLAR, Caspase 8, HCLS1, Deleted in Colorectal Cancer, TRAF3 and GroEL. This gene which is located at 4q35 encodes a protein that is a member of the cysteine-aspartic acid protease (caspase) family. Sequential activation of caspases plays a central role in the execution-phase of cell apoptosis. Caspases exist as inactive proenzymes that undergo proteolytic processing at conserved aspartic residues to produce two subunits, large and small, that dimerize to form the active enzyme. This protein cleaves and activates caspases 6, 7, and 9; and the protein itself is processed by caspases 8, 9, and 10. It is the predominant caspase involved in the cleavage of amyloid-beta 4A precursor protein, which is associated with neuronal death in Alzheimer's disease. And the caspase-3 activation in heart failure sequentially cleaves SRF and generates a truncated SRF that appears to function as a dominant-negative transcription factor. Additionally, the caspase-3 influence on bone mineral density should be considered in any in vivo application of caspase-3 inhibitors to the treatment of human disease. In erythroid precursors undergoing terminal differentiation, Hsp70 prevents active CASP3 from cleaving GATA1 and inducing apoptosis.

Overview

Product Name	Anti-Caspase-3 (P10)/CASP3 Antibody Picoband®
Reactive Species	Human
Description	Boster Bio Anti-Caspase-3 (P10)/CASP3 Antibody catalog # PA1302-1. Tested in IHC, ICC, WB applications. This antibody reacts with Human. The brand Picoband indicates this is a premium antibody that guarantees superior quality, high affinity, and strong signals with minimal background in Western blot applications. Only our best-performing antibodies are designated as Picoband, ensuring unmatched performance.
Application	IHC, ICC, WB
Clonality	Polyclonal
Formulation	Each vial contains antibody formulated with stabilizing components, 0.9mg NaCl, 0.2mg Na2HPO4, 0.05mg Thimerosal, 0.05mg NaN3. *This antibody is supplied in a stabilized formulation. Compatibility with conjugation reactions depends on the chemistry of the conjugation method used. For conjugation methods that are not compatible with the stabilizing components present in this formulation, a carrier-free antibody format is required.
Storage Instructions	Store at -20˚C for one year from date of receipt. After reconstitution, at 4˚C for one month. It can also be aliquotted and stored frozen at -20˚C for six months. Avoid repeated freeze-thaw cycles.
Host	Rabbit
Uniprot ID	P42574

Technical Details

Immunogen	A synthetic peptide corresponding to a sequence at the C-terminus of human Caspase-3(p10).

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Recommended Detection Systems	Boster recommends Enhanced Chemiluminescent Kit with anti-Rabbit IgG (EK1002) for Western blot, and HRP Conjugated anti-Rabbit IgG Super Vision Assay Kit (SV0002-1) for IHC(P) and ICC.
Cross Reactivity	No cross-reactivity with other proteins
Isotype	Rabbit IgG
Form	Lyophilized
Concentration	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml.
Purification	Immunogen affinity purified.
Suggested Dilutions	Immunohistochemistry (Paraffin-embedded Section), 0.5-1ug/ml, Human Immunocytochemistry , 0.5-1ug/ml, Human, - Western blot, 0.1-0.5ug/ml, Human

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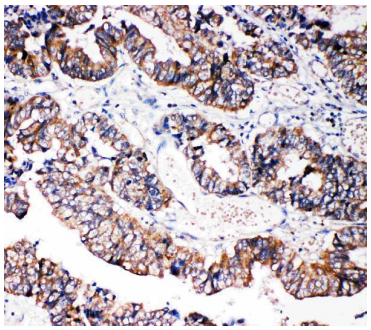
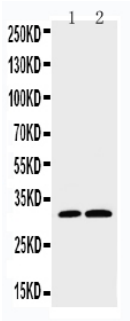
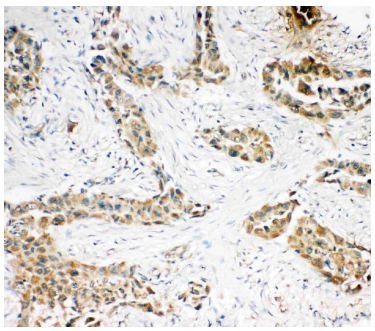
Anti-Caspase-3 (P10)/CASP3 Antibody Picoband® (PA1302-1) Images



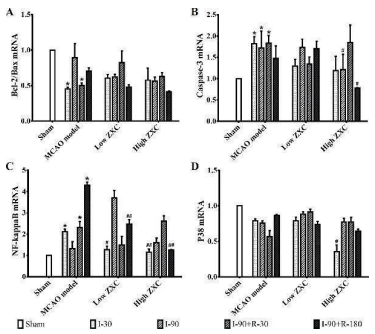
Anti-Caspase-3(P10), PA1302-1, IHC(P)IHC(P): Human Intestinal Cancer Tissue



Anti-Caspase-3(P10), PA1302-1, Western blottingLane 1: HELA Cell LysateLane 2: SMMC Cell Lysate



Anti-Caspase-3(P10), PA1302-1, IHC(P)IHC(P): Human Lung Cancer Tissue



Effects of ZXC on the mRNA levels of the Bcl-2/Bax ratio (A) , caspase-3 (B) , nuclear factor (NF)-κB (C) , and p38 (D) in the prefrontal cortex of ischemia-reperfusion injury rats. The data are expressed as mean ± standard deviation (n = 3). I-30, ischemia for 30 min; I-90, ischemia for 90 min; I-90+R-30, ischemia for 90 min, then reperfusion for 30 min; I-90+R-180, ischemia for 90 min, then reperfusion for 180 min. * P < 0.05 vs. sham group; # P < 0.05 vs. model group; ## P < 0.01 vs. model group.Index in PubMed under a CC BY license. PMID: 31611791

Western blotting results for Sham, Model and ZXC groups (A) . Effects of ZXC on the protein expressions Bcl-2 (B) , Bax (C) , Caspase-3 (D) , NF-κB (E) , and p38 (F) in brain tissue of ischemia-reperfusion injury rats induced by MCAO. The data are expressed as mean ± standard deviation (n = 4). I-30, ischemia for 30 min; I-90, ischemia for 90 min; I-90+R-30, ischemia for 90 min, then reperfusion for 30 min. *P < 0.05

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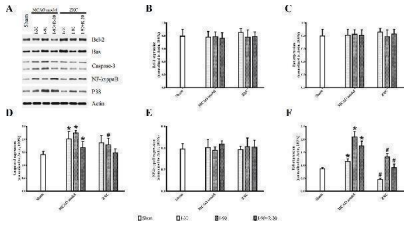
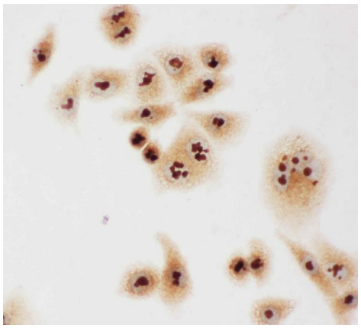
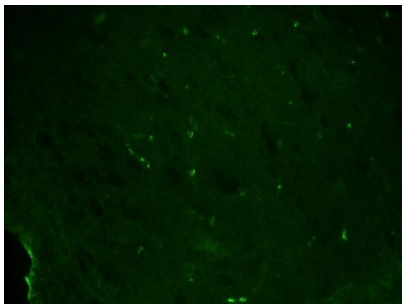


vs. sham group; # P < 0.05 vs. model group.Index in PubMed under a CC BY license. PMID: 31611791



ICC analysis of Caspase-3(P10) using anti-Caspase-3(P10) antibody (PA1302-1). Caspase-3(P10) was detected in immunocytochemical section of A549 cell. Enzyme antigen retrieval was performed using IHC enzyme antigen retrieval reagent (AR0022) for 15 mins. The cells were blocked with 10% goat serum. And then incubated with 1ug/ml rabbit anti-Caspase-3(P10) Antibody (PA1302-1) overnight at 4°C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The section was developed using Strepavidin-Biotin-Complex (SABC)(Catalog # SA1022) with DAB as the chromogen.



IHC analysis of caspase-3 (P10)/CASP3 using anti-caspase-3 (P10)/CASP3 antibody (PA1302-1). caspase-3 (P10)/CASP3 was detected in a rat spinal cord. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with peroxidase blocker. The tissue section was then incubated with 2 ug/ml anti-caspase-3 (P10)/CASP3 antibody (PA1302-1) at 1:200 overnight at 4°C. Peroxidase Conjugated Goat Anti-rabbit IgG was used as secondary antibody and incubated at 1:500 for 1h at room temperature. The tissue section was developed using fluorescent microscope.

103 Publications Citing This Product

1. PubMed ID: -, Ahmed S. Ahmed,JAK-1/STAT-3 pathway mediated role in aging cerebellar cortex degenerative changes of albino wistar rats, Translational Research in Anatomy, 2020,100089,ISSN 2214-854X, https://doi.org/10. 1016/j.tria.2020.100089.

2. PubMed ID: -, Gang Li,Jing Zhou,Mengyu Sun,Juren Cen,Jing Xu,Role of luteolin extracted from Clerodendrum cyrtophyllum Turcz leaves in protecting HepG2 cells from TBHP-induced oxidative stress and its cytotoxicity, genotoxicity,Journal of Functional Foods, Volume 74, 2

3. PubMed ID: 33044585, Yu Y,Wang Y,Fei X,Song Z,Xie F,Yang F,Liu X,Xu Z,Wang G.All-Trans Retinoic Acid Prevented Vein Grafts Stenosis by Inhibiting Rb-E2F Mediated Cell Cycle Progression and KLF5-RARalpha Interaction in Human Vein Smooth Muscle Cells.Cardiovasc Drugs Ther.2020 Oct

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