

Anti-Caspase-3(P17)/CASP3 Antibody

Catalog Number: PA1961-1

About Casp3

CASP3 (Caspase3 Apoptosis-Related Cysteine Protease), also known as YAMA, CPP32 or APOPAIN, is a caspase protein that interacts with caspase 8 and caspase 9. It is encoded by the CASP3 gene. The CASP3 protein is a member of the cysteine-aspartic acid protease (caspase) family. Tiso et al. (1996) used radiation hybrid mapping to localize the CPP32 gene to human chromosome 4q33-q35.1. Fernandes-Alnemri et al. (1994) found that overexpression of CPP32 in insect cells induced apoptosis. Coexpression of the 2 CPP32 subunits in insect cells also resulted in apoptosis. Tewari et al. (1995) showed that purified human ICE cleaved the Yama proenzyme into a proteolytically active form and that activated Yama cleaved PARP into the 85-kD apoptotic form.

Overview

Product Name	Anti-Caspase-3(P17)/CASP3 Antibody
Reactive Species	Mouse, Rat
Description	Boster Bio Anti-Caspase-3 (P17)/CASP3 Antibody catalog # PA1961-1. Tested in IHC, WB applications. This antibody reacts with Mouse, Rat.
Application	IHC, WB
Clonality	Polyclonal
Formulation	Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na ₂ HPO ₄ , 0.05mg Thimerosal, 0.05mg NaN ₃ .
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	P70677

Technical Details

Immunogen	A synthetic peptide corresponding to a sequence at the N-terminus of mouse Caspase-3(P17), different from the related rat sequence by one amino acid.
Predicted Reactive Species	Hamster
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).
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	Dilute the sample so that the expected range of concentrations fall within the detection range of this kit. If the expected range of concentration is unknown, a pilot test should be conducted to decide the optimal dilution ratio for your samples. Some PubMed article(s) citing the expression level of this target are as follows: Boster Bio's internal QC testing used: Immunohistochemistry (Paraffin-embedded Section), 0.5-1ug/ml, Rat, Mouse, By Heat Western blot, 0.1-0.5ug/ml, Mouse, Rat

Anti-Caspase-3(P17)/CASP3 Antibody (PA1961-1) Images

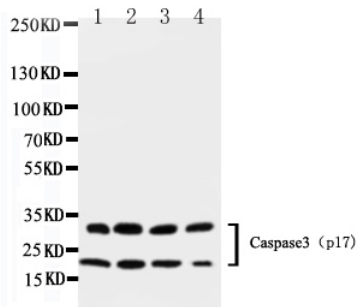


Figure 1. Western blot analysis of Caspase-3 (P17) using anti-Caspase-3 (P17) antibody (PA1961-1).

Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 50ug of sample under reducing conditions.

Lane 1: Rat Heart Tissue Lysate

Lane 2: Rat Liver Tissue Lysate

Lane 3: Rat Thymus Tissue Lysate

Lane 4: Rat Spleen Tissue Lysate.

After Electrophoresis, proteins were transferred to a Nitrocellulose membrane at 150mA for 50-90 minutes.

Blocked the membrane with 5% Non-fat Milk/ TBS for 1.5 hour at RT. The membrane was incubated with rabbit anti-Caspase-3 (P17) antigen affinity purified polyclonal antibody (Catalog # PA1961-1) at 0.5 ug/mL overnight at 4°C, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-rabbit IgG-HRP secondary antibody at a dilution of 1:10000 for 1.5 hour at RT. The signal is developed using an Enhanced Chemiluminescent detection (ECL) kit (Catalog # EK1002) with Tanon 5200 system. A specific band was detected for Caspase-3 (P17) at approximately 32KD,19KD. The expected band size for Caspase-3 (P17) is at 32KD,17KD.

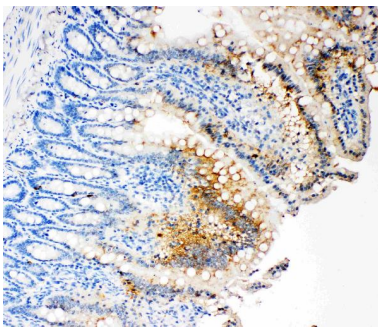


Figure 2. IHC analysis of Caspase-3 (P17) using anti-Caspase-3 (P17) antibody (PA1961-1).

Caspase-3 (P17) was detected in paraffin-embedded section of rat intestine tissues. Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1ug/ml rabbit anti-Caspase-3 (P17) Antibody (PA1961-1) overnight at 4°C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using Streptavidin-Biotin-Complex (SABC)(Catalog # SA1022) with DAB as the chromogen.

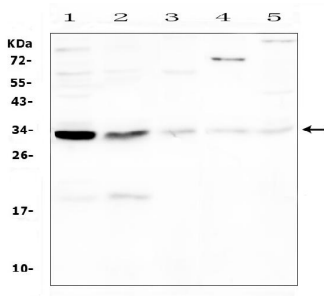


Figure 3. Western blot analysis of Caspase-3 (P17) using anti-Caspase-3 (P17) antibody (PA1961-1).

Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 50ug of sample under reducing conditions.

Lane 1: mouse thymus tissue lysates,

Lane 2: mouse spleen tissue lysates,

Lane 3: mouse lung tissue lysates,

Lane 4: mouse brain tissue lysates,

Lane 5: mouse testis tissue lysates.

After Electrophoresis, proteins were transferred to a Nitrocellulose membrane at 150mA for 50-90 minutes.

Blocked the membrane with 5% Non-fat Milk/ TBS for 1.5 hour at RT. The membrane was incubated with rabbit anti-

Caspase-3 (P17) antigen affinity purified polyclonal antibody (Catalog # PA1961-1) at 0.5 ug/mL overnight at 4°C, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-rabbit IgG-HRP secondary antibody at a dilution of 1:10000 for 1.5 hour at RT. The signal is developed using an Enhanced Chemiluminescent detection (ECL) kit (Catalog # EK1002) with Tanon 5200 system. A specific band was detected for Caspase-3 (P17) at approximately 32KD,19KD. The expected band size for Caspase-3 (P17) is at 32KD,17KD.

117 Publications Citing This Product

1. PubMed ID: -, Yan Zhang,Linchao Zhang,JiaLu Bao et al.Perfluorooctanoic Acid Exposure in Early Pregnancy Induces Oxidative Stress in The Uterus and Liver in Mice,13 February 2021,PREPRINT (Version 1) available at Research Square [https://doi.org/10.21203/rs.3.rs-160447]
2. PubMed ID: -, Lu Kong,Yongya Wu,Wangcheng Hu,Lin Liu,Yuying Xue,Geyu Liang,Mechanisms underlying reproductive toxicity induced by nickel nanoparticles identified by comprehensive gene expression analysis in GC-1 spg cells,Environmental Pollution,2021,116556,ISSN 0269-7
3. PubMed ID: -, Jia-Hui Yan,Yi-Shun Ji,Man-Li Yang,Jun Fu,Hu Shan,Li-Li Wang,Lei Zhang,Jing-Yuan Xiao,Xiao-Ying Kong, and Jin-Sheng Shi ACS Applied Nano Materials 2020 3 (9), 8817-8828 DOI: 10.1021/acsnm.0c01607

Visit [bosterbio.com/anti-caspase-3-p17-antibody-pa1961-1-boster.html](https://www.bosterbio.com/anti-caspase-3-p17-antibody-pa1961-1-boster.html) to see all 117 publications.

Submit a product review to Biocompare.com

Submit a review of this product to Biocompare.com to receive a \$20 Amazon.com giftcard! Your reviews help your fellow scientists make the right decisions. Thank you for your contribution.



Anti-Caspase-3(P17)/CASP3 Antibody