

Anti-Caspase 4/CASP4 Antibody Picoband™

Catalog Number: A02941-1

About CASP4

Caspase 4 is an enzyme that proteolytically cleaves other proteins at an aspartic acid residue, and belongs to a family of cysteine proteases called caspases. The Caspase 4 gene is mapped to a P1 clone containing the ICE gene, which is located at chromosome 11q22.2-q22.3. It contains 8 coding exons. The function of caspase 4 is not fully known, but it is believed to be an inflammatory caspase, along with caspase 1, caspase 5 (and the murine homolog caspase 11), with a role in the immune system.

Overview

Product Name	Anti-Caspase 4/CASP4 Antibody Picoband™
Reactive Species	Human
Description	Boster Bio Anti-Caspase 4/CASP4 Antibody Picoband™ catalog # A02941-1. Tested in ELISA, Flow Cytometry, IF, IHC, ICC, WB applications. This antibody reacts with Human.
Application	ELISA, Flow Cytometry, IF, IHC, ICC, WB
Clonality	Polyclonal
Formulation	Each vial contains 4mg Trehalose, 0.9mg NaCl, 0.2mg Na ₂ HPO ₄ , 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	P49662

Technical Details

Immunogen	E. coli-derived human Caspase 4 recombinant protein (Position: H111-R194).
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), IHC(F) 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

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:

Western blot, 0.1-0.5ug/ml

Immunohistochemistry (Paraffin-embedded Section), 0.5-1ug/ml

Immunohistochemistry (Frozen Section), 0.5-1ug/ml

Immunocytochemistry, 0.5-1ug/ml

Flow Cytometry, 1-3ug/1x10⁶ cells

Immunofluorescence, 2ug/ml

Direct ELISA, 0.1-0.5ug/ml

Anti-Caspase 4/CASP4 Antibody Picoband™ (A02941-1) Images

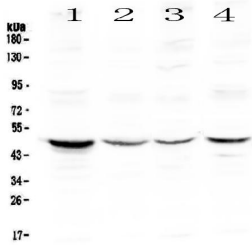


Figure 1. Western blot analysis of Caspase 4 using anti-Caspase 4 antibody (A02941-1).

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: human Hela whole cell lysates,

Lane 2: human COLO-320 whole cell lysates,

Lane 3: human SW620 whole cell lysates,

Lane 4: human HepG2 whole cell 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 4 antigen affinity purified polyclonal antibody (Catalog # A02941-1) 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 4 at approximately 48KD. The expected band size for Caspase 4 is at 43KD.

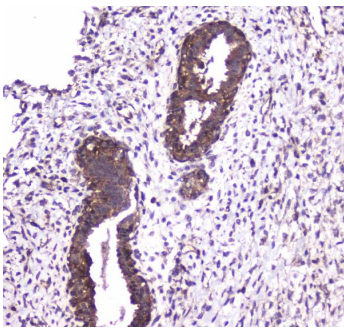


Figure 2. IHC analysis of Caspase 4 using anti-Caspase 4 antibody (A02941-1).

Caspase 4 was detected in paraffin-embedded section of human colon cancer tissue. 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 4 Antibody (A02941-1) 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.

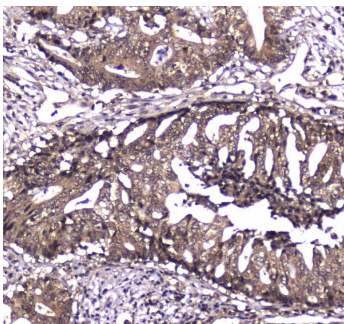


Figure 3. IHC analysis of Caspase 4 using anti-Caspase 4 antibody (A02941-1).

Caspase 4 was detected in paraffin-embedded section of human mammary cancer tissue. 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 4 Antibody (A02941-1) 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.

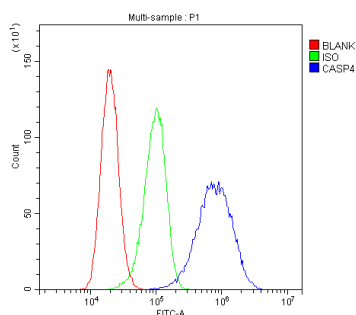


Figure 4. Flow Cytometry analysis of A431 cells using anti-Caspase 4 antibody (A02941-1).

Overlay histogram showing A431 cells stained with A02941-1 (Blue line). The cells were blocked with 10% normal goat serum. And then incubated with rabbit anti-Caspase 4 Antibody (A02941-1, 1ug/1x10⁶ cells) for 30 min at 20°C. DyLight®488 conjugated goat anti-rabbit IgG (BA1127, 5-10ug/1x10⁶ cells) was used as secondary antibody for 30 minutes at 20°C. Isotype control antibody (Green line) was rabbit IgG (1ug/1x10⁶) used under the same conditions. Unlabelled sample (Red line) was also used as a control.

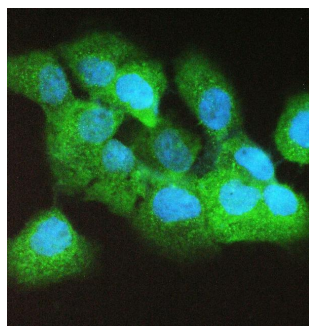


Figure 5. IF analysis of Caspase 4 using anti-Caspase 4 antibody (A02941-1).

Caspase 4 was detected in an immunocytochemical section of A431 cell. Enzyme antigen retrieval was performed using IHC enzyme antigen retrieval reagent (AR0022) for 15 mins. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2ug/mL rabbit anti-Caspase 4 Antibody (A02941-1) overnight at 4°C. DyLight®488 Conjugated Goat Anti-Rabbit IgG (BA1127) was used as secondary antibody at 1:100 dilution and incubated for 30 minutes at 37°C. The section was counterstained with DAPI. Visualize using a fluorescence microscope and filter sets appropriate for the label used.

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