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antibody and ELISA experts

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Anti-TAPA1/CD81 Antibody Picoband™

Catalog Number: A01281-2

About CD81

CD81 molecule, also known as CD81 (Cluster of Differentiation 81), is a protein which in humans is encoded by the CD81 gene. The protein encoded by this gene is a member of the transmembrane 4 superfamily, also known as the tetraspanin family. Most of these members are cell-surface proteins that are characterized by the presence of four hydrophobic domains. The proteins mediate signal transduction events that play a role in the regulation of cell development, activation, growth and motility. This encoded protein is a cell surface glycoprotein that is known to complex with integrins. This protein appears to promote muscle cell fusion and support myotube maintenance. Also it may be involved in signal transduction. This gene is localized in the tumor-suppressor gene region and thus it is a candidate gene for malignancies. Two transcript variants encoding different isoforms have been found for this gene.

Overview

Product Name	Anti-TAPA1/CD81 Antibody Picoband™
Reactive Species	Human, Mouse, Rat
Description	Boster Bio Anti-TAPA1/CD81 Antibody Picoband™ catalog # A01281-2. Tested in ELISA, Flow Cytometry, IHC, IHC-F, ICC, WB applications. This antibody reacts with Human, Mouse, Rat.
Application	ELISA, Flow Cytometry, IHC, IHC-F, ICC, WB
Clonality	Polyclonal
Formulation	Each vial contains 4mg Trehalose, 0.9mg NaCl, 0.2mg Na_2HPO_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	P60033

Technical Details

Immunogen	E. coli-derived human TAPA1 recombinant protein (Position: F113-K201).
Predicted Reactive Species	Human
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

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Form	Lyophilized
Concentration	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml.
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/1x10^6 cells Direct ELISA, 0.1-0.5ug/ml

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Anti-TAPA1/CD81 Antibody Picoband™ (A01281-2) Images

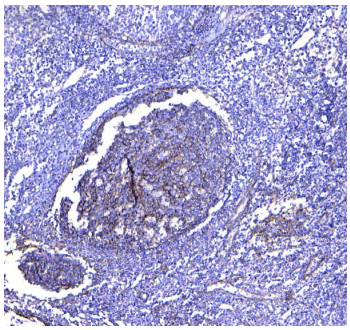

Figure 1. IHC analysis of TAPA1 using anti-TAPA1 antibody (A01281-2).
TAPA1 was detected in paraffin-embedded section of human tonsil tissue . Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1ug/ml rabbit anti-TAPA1 Antibody (A01281-2) 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 Strepavidin-Biotin-Complex (SABC)(Catalog # SA1022) with DAB as the chromogen.

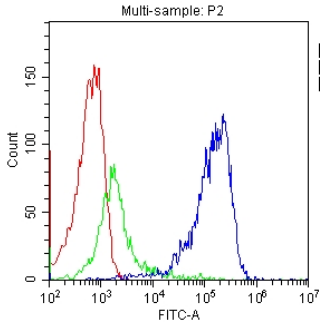

Figure 2. Flow Cytometry analysis of PBMC cells using anti-TAPA1 antibody (A01281-2).
Overlay histogram showing PBMC cells stained with A01281-2 (Blue line).The cells were blocked with 10% normal goat serum. And then incubated with rabbit anti-TAPA1 Antibody (A01281-2,1ug/1x106 cells) for 30 min at 20°C. DyLight488 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.

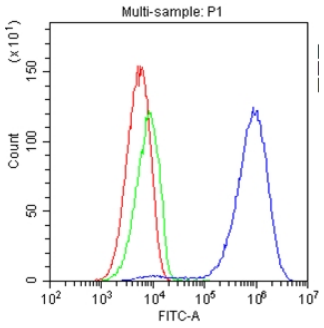

Figure 3. Flow Cytometry analysis of Jurkat cells using anti-TAPA1 antibody (A01281-2).
Overlay histogram showing Jurkat cells stained with A01281-2 (Blue line).The cells were blocked with 10% normal goat serum. And then incubated with rabbit anti-TAPA1 Antibody (A01281-2,1ug/1x106 cells) for 30 min at 20°C. DyLight488 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.

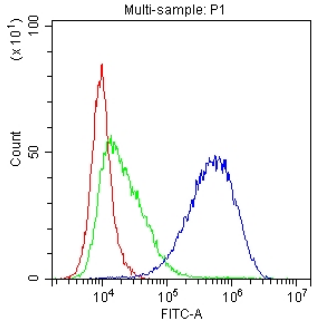

Figure 4. Flow Cytometry analysis of K562 cells using anti-TAPA1 antibody (A01281-2).
Overlay histogram showing K562 cells stained with A01281-2 (Blue line).The cells were blocked with 10% normal goat serum. And then incubated with rabbit anti-TAPA1 Antibody (A01281-2,1ug/1x106 cells) for 30 min at 20°C. DyLight488 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.

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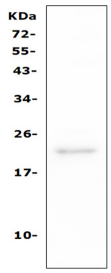

Figure 5. Western blot analysis of TAPA1 using anti-TAPA1 antibody (A01281-2).
Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 50ug of sample under reducing conditions.
Lane 1: mouse raw264.7 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-TAPA1 antigen affinity purified polyclonal antibody (Catalog # A01281-2) 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 TAPA1 at approximately 22KD. The expected band size for TAPA1 is at 22KD.

3 Publications Citing This Product

1. PubMed ID: 10.3390/nano11071853, Exosomal Surface Protein Detection with Quantum Dots and Immunomagnetic Capture for Cancer Detection

2. PubMed ID: 32059163, Wang D,Hao C,Zhang L,Zhang J,Liu S,Li Y,Qu Y,Zhao Y,Huang R,Wei J,Yao W.Exosomal miR-125a-5p derived from silica-exposed macrophages induces fibroblast transdifferentiation.Ecotoxicol Environ Saf.2020 Apr 1;192:110253.doi:10.1016/j.ecoenv.2020.110253.Epub

3. PubMed ID: 32400849, Cao G,Meng X, Han X,Li J.Exosomes derived from circRNA Rtn4-modified BMSCs attenuate TNF-alpha-induced cytotoxicity and apoptosis in murine MC3T3-E1 cells by sponging miR-146a.Biosci Rep.2020 May 29;40(5): BSR20193436.doi:10.1042/BSR20193436.PMID:32400849;PMC

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