

Anti-Talin 1/TLN1 Antibody Picoband™ (monoclonal, 2G10D2)

Catalog # ABO16572

Product Information

Application	WB, FC
Primary Accession	Q9Y490
Host	Mouse
Isotype	Mouse IgG1
Reactivity	Rat, Human, Mouse
Clonality	Monoclonal
Format	Lyophilized
Description	Anti-Talin 1/TLN1 Antibody Picoband™ (monoclonal, 2G10D2) . Tested in Flow Cytometry, WB applications. This antibody reacts with Human, Mouse, Rat.
Reconstitution	Adding 0.2 ml of distilled water will yield a concentration of 500 µg/ml.

Additional Information

Gene ID	7094
Other Names	Talin-1, TLN1, KIAA1027, TLN
Calculated MW	269767
Application Details	Western blot, 0.25-0.5 µg/ml, Human, Mouse, Rat Flow Cytometry, 1-3 µg/1x10 ⁶ cells, Human
Source	Eukaryota
Contents	Each vial contains 4 mg Trehalose, 0.9 mg NaCl and 0.2 mg Na ₂ HPO ₄ .
Clone Names Immunogen	Clone: 2G10D2 E.coli-derived human Talin 1/TLN1 recombinant protein (Position: Q1658-N1876).
Purification	Immunogen affinity purified.
Storage	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 freezing and thawing.

Protein Information

Name	TLN1
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Synonyms	KIAA1027, TLN
Function	High molecular weight cytoskeletal protein concentrated at regions of cell-matrix and cell-cell contacts. Involved in connections of major cytoskeletal structures to the plasma membrane. With KANK1 co-organize the assembly of cortical microtubule stabilizing complexes (CMSCs) positioned to control microtubule-actin crosstalk at focal adhesions (FAs) rims.
Cellular Location	Cell projection, ruffle membrane; Peripheral membrane protein; Cytoplasmic side. Cytoplasm, cytoskeleton. Cell surface {ECO:0000250 UniProtKB:P26039}. Cell junction, focal adhesion {ECO:0000250 UniProtKB:P26039}. Note=Colocalizes with LAYN at the membrane ruffles. Localized preferentially in focal adhesions than fibrillar adhesions (By similarity).
Tissue Location	[Isoform 2]: Expressed at low to non-detectable levels in many tissues but highly expressed in skin and pancreas with other tissues including kidney cortex, endocervix, testis, pituitary, liver, and spleen also showing robust expression

Background

Talin-1 is a protein that in humans is encoded by the TLN1 gene. This gene encodes a cytoskeletal protein that is concentrated in areas of cell-substratum and cell-cell contacts. The encoded protein plays a significant role in the assembly of actin filaments and in spreading and migration of various cell types, including fibroblasts and osteoclasts. It codistributes with integrins in the cell surface membrane in order to assist in the attachment of adherent cells to extracellular matrices and of lymphocytes to other cells. The N-terminus of this protein contains elements for localization to cell-extracellular matrix junctions. The C-terminus contains binding sites for proteins such as beta-1-integrin, actin, and vinculin.

Images

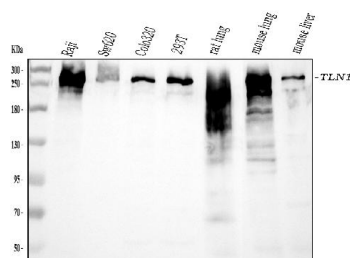


Figure 1. Western blot analysis of TLN1 using anti-TLN1 antibody (M02859).

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 30 ug of sample under reducing conditions.

Lane 1: human Raji whole cell lysates,
Lane 2: human SW620 whole cell lysates,
Lane 3: human COLO320 whole cell lysates,
Lane 4: human 293T whole cell lysates,
Lane 5: rat lung tissue lysates,
Lane 6: mouse lung tissue lysates,
Lane 7: mouse liver tissue lysates.

After electrophoresis, proteins were transferred to a nitrocellulose membrane at 150 mA for 50-90 minutes. Blocked the membrane with 5% non-fat milk/TBS for 1.5 hour at RT. The membrane was incubated with mouse anti-TLN1 antigen affinity purified monoclonal antibody (Catalog # M02859) at 0.5 µg/mL overnight at 4°C, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-mouse 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 # EK1001) with Tanon 5200 system. A specific band was detected for TLN1 at approximately 250-270 kDa. The expected band size for

TLN1 is at 270 kDa.

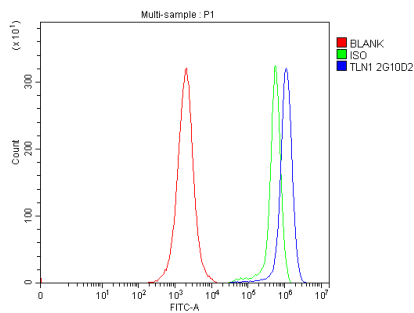


Figure 2. Flow Cytometry analysis of JK cells using anti-TLN1 antibody (M02859). Overlay histogram showing JK cells stained with M02859 (Blue line). The cells were blocked with 10% normal goat serum. And then incubated with mouse anti-TLN1 Antibody (M02859, 1 $\mu\text{g}/1 \times 10^6$ cells) for 30 min at 20°C. DyLight®488 conjugated goat anti-mouse IgG (BA1126, 5-10 $\mu\text{g}/1 \times 10^6$ cells) was used as secondary antibody for 30 minutes at 20°C. Isotype control antibody (Green line) was mouse IgG (1 $\mu\text{g}/1 \times 10^6$) used under the same conditions. Unlabelled sample (Red line) was also used as a control.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.