Anti-Integrin beta 1 Antibody

ER31001

Product Type:	Rabbit polyclonal IgG, primary antibodies
Species reactivity:	Human, Mouse
Applications:	WB, IHC-P, FC
Molecular Wt:	Predicted band size: 88 kDa

Description: Integrin beta-1 (ITGB1), also known as CD29, is a cell surface receptor that in humans is encoded by the ITGB1 gene. This integrin associates with integrin alpha 1 and integrin alpha 2 to form integrin complexes which function as collagen receptors. It also forms dimers with integrin alpha 3 to form integrin receptors for netrin 1 and reelin. These and other integrin beta 1 complexes have been historically known as very late activation (VLA) antigens. Integrin beta 1 is expressed as at least four different isoforms. In cardiac muscle and skeletal muscle, the integrin beta-1D isoform is specifically expressed, and localizes to costameres, where it aids in the lateral force transmission from the Z-discs to the extracellular matrix. Abnormal levels of integrin beta-1D have been found in limb girdle muscular dystrophy and polyneuropathy.

Immunogen: Synthetic peptide within residues of Integrin beta-1 aa 749-798 / 798.

Positive control: Human liver, human kidney, NIH/3T3, A172, Hela, human liver carcinoma tissue, human colon carcinoma tissue, HepG2.

Subcellular location: Cell membrane, cytoplasm

Database links: SwissProt: P05556 Human | P09055 Mouse

Recommended Dilutions:

WB	1:500-1:1,000
FC	1:100
IHC-P	1:200

Storage Buffer: 1*PBS (pH7.4), 0.2% BSA, 40% Glycerol. Preservative: 0.05% Sodium Azide.

Storage Instruction: Store at +4℃ after thawing. Aliquot store at -20℃ or -80℃. Avoid repeated freeze / thaw cycles.

Purity: Immunogen affinity purified.

Images

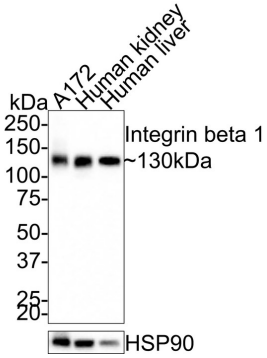

Fig1: Western blot analysis of Integrin beta 1 on different lysates with Rabbit anti-Integrin beta 1 antibody (ER31001) at 1/1,000 dilution.

Lane 1: A172 cell lysate
Lane 2: Human kidney tissue lysate
Lane 3: Human liver tissue lysate

Lysates/proteins at 20 µg/Lane.

Predicted band size: 88 kDa
Observed band size: 130 kDa

Exposure time: 13 seconds;

4-20% SDS-PAGE gel.

Proteins were transferred to a PVDF membrane and blocked with 5% NFDM/TBST for 1 hour at room temperature. The primary antibody (ER31001) at 1/1,000 dilution was used in 5% NFDM/TBST at room temperature for 2 hours. Goat Anti-Rabbit IgG - HRP Secondary Antibody (HA1001) at 1:100,000 dilution was used for 1 hour at room temperature.

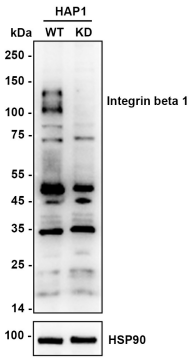

Fig2: Western blot analysis of Integrin beta 1 on different lysates with Rabbit anti-Integrin beta 1 antibody (ER31001) at 1/2,000 dilution.

Lane 1: HAP1-parental cell lysate
Lane 2: HAP1-Integrin beta 1 KD cell lysate

Lysates/proteins at 10 µg/Lane.

Predicted band size: 88 kDa
Observed band size: 120-140 kDa

Exposure time: 2 minutes; ECL: K1801;

4-20% SDS-PAGE gel.

Proteins were transferred to a PVDF membrane and blocked with 5% NFDM/TBST for 1 hour at room temperature. The primary antibody (ER31001) at 1/2,000 dilution was used in primary antibody dilution (K1803) at 4℃ overnight. Goat Anti-Rabbit IgG - HRP Secondary Antibody (HA1001) at 1/50,000 dilution was used for 1 hour at room temperature.

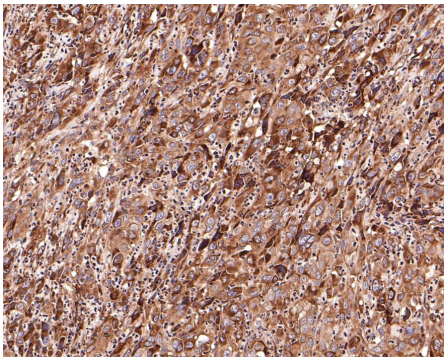

Fig3: Immunohistochemical analysis of paraffin-embedded human liver carcinoma tissue with Rabbit anti-Integrin beta 1 antibody (ER31001) at 1/1,000 dilution.

The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0) for 20 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with ddH_2O and PBS, and then probed with the primary antibody (ER31001) at 1/1,000 dilution for 1 hour at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

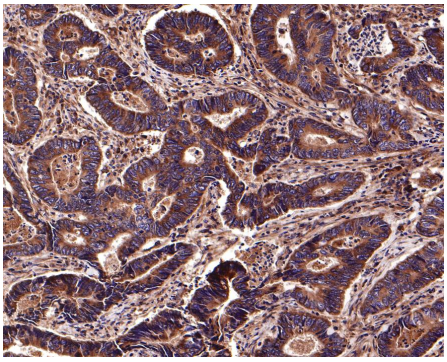

Fig4: Immunohistochemical analysis of paraffin-embedded human colon carcinoma tissue with Rabbit anti-Integrin beta 1 antibody (ER31001) at 1/1,000 dilution.

The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0) for 20 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with ddH_2O and PBS, and then probed with the primary antibody (ER31001) at 1/1,000 dilution for 1 hour at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

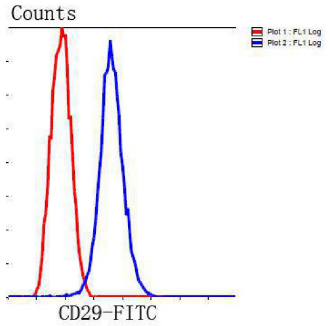

Fig5: Flow cytometric analysis of HepG2 cells with CD29 antibody at 1/100 dilution (blue) compared with an unlabelled control (cells without incubation with primary antibody; red). Goat anti rabbit IgG (FITC) was used as the secondary antibody.

Background References

1. "Glycoproteomics analysis of human liver tissue by combination of multiple enzyme digestion and hydrazide chemistry." Chen R., Jiang X., Sun D., Han G., Wang F., Ye M., Wang L., Zou H. J. Proteome Res. 8:651-661(2009)
2. "Osteoblast mineralization requires beta1 integrin/ICAP-1-dependent fibronectin deposition." Brunner M., Millon-Fremillon A., Chevalier G., Nakchbandi I.A., Mosher D., Block M.R., Albiges-Rizo C., Bouvard D. J. Cell Biol. 194:307-322(2011)