

# Anti-Integrin alpha 4 Antibody [JA09-36]

## ET1704-31



|                            |   |
|----------------------------|---|
| <b>Product Type:</b>       | Recombinant Rabbit monoclonal IgG, primary antibodies |
| <b>Species reactivity:</b> | Human, Mouse, Rat                                     |
| <b>Applications:</b>       | WB, IHC-P, FC   |
| <b>Molecular Wt:</b>       | Predicted band size: 115 kDa                          |
| <b>Clone number:</b>       | JA09-36   |

**Description:** Integrins are heterodimers composed of noncovalently associated transmembrane  $\alpha$  and  $\beta$  subunits. The 16  $\alpha$  and 8  $\beta$  subunits heterodimerize to produce more than 20 different receptors. Most integrin receptors bind ligands that are components of the extracellular matrix, including fibronectin, collagen and vitronectin. Certain integrins can also bind to soluble ligands such as fibrinogen, or to counterreceptors on adjacent cells such as the intracellular adhesion molecules (ICAMs), leading to aggregation of cells. Ligands serve to cross-link or cluster integrins by binding to adjacent integrin receptors; both receptor clustering and ligand occupancy are necessary for the activation of integrin-mediated responses. In addition to mediating cell adhesion and cytoskeletal organization, integrins function as signaling receptors. Signals transduced by integrins play a role in many biological processes, including cell growth, differentiation, migration and apoptosis.

**Immunogen:** Synthetic peptide within Human Integrin alpha 4 aa 983-1032 / 1032.

**Positive control:** Jurkat cell lysate, mouse spleen tissue lysate, rat spleen tissue lysate, RAW264.7 cell lysate, human tonsil tissue, human spleen tissue, Jurkat.

**Subcellular location:** Membrane.

**Database links:** SwissProt: P13612 Human | Q00651 Mouse  
Entrez Gene: 311144 Rat

**Recommended Dilutions:**

|              |            |
|--------------|------------|
| <b>WB</b>    | 1:1,000    |
| <b>IHC-P</b> | 1:50-1:200 |
| <b>FC</b>    | 1:10-1:50  |

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

**Storage Instruction:** Shipped at 4°C. Store at +4°C short term (1-2 weeks). It is recommended to aliquot into single-use upon delivery. Store at -20°C long term.

**Purity:** Protein A affinity purified.

Hangzhou Huaan Biotechnology Co., Ltd.

Orders:0086-571-88062880

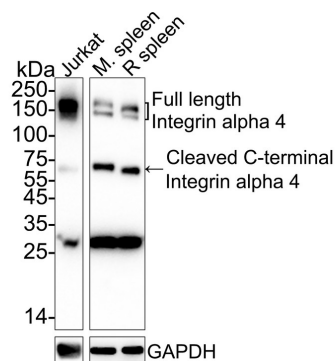
Technical:0086-571-89986345

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Applications:WB=Western blot IHC-P=Immunohistochemistry (paraffin) IF-Cell=Immunofluorescence (Cell) IF-Tissue=Immunofluorescence (Tissue) FC=Flow cytometry IP=Immunoprecipitation

## Images



**Fig1:** Western blot analysis of Integrin alpha 4 on different lysates with Rabbit anti-Integrin alpha 4 antibody (ET1704-31) at 1/1,000 dilution.

Lane 1: Jurkat cell lysate (20 µg/Lane)

Lane 2: Mouse spleen tissue lysate (40 µg/Lane)

Lane 3: Rat spleen tissue lysate (40 µg/Lane)

Predicted band size: 115 kDa

Observed band size: 70/140/150 kDa

Exposure time: Lane 1: 25 seconds; Lane 2-3: 5 minutes; ECL: K1801;

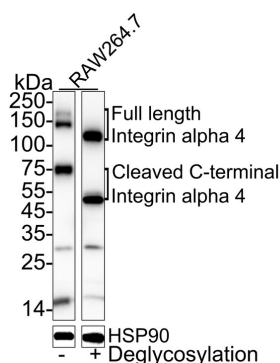
4-20% SDS-PAGE gel.

Proteins were transferred to a PVDF membrane and blocked with 5% NFDm/TBST for 1 hour at room temperature. The primary antibody (ET1704-31) at 1/1,000 dilution was used in 5% NFDm/TBST at 4°C overnight. Goat Anti-Rabbit IgG - HRP Secondary Antibody (HA1001) at 1/50,000 dilution was used for 1 hour at room temperature.

**Fig2:** Western blot analysis of Integrin alpha 4 on different lysates with Rabbit anti-Integrin alpha 4 antibody (ET1704-31) at 1/1,000 dilution.

Lane 1: RAW264.7 cell lysate

Lane 2: RAW264.7 cell lysate treated with deglycosylation



Lysates/proteins at 20 µg/Lane.

Predicted band size: 115 kDa

Observed band size: 70/140/150 kDa

Exposure time: 1 minute; 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 (ET1704-31) at 1/1,000 dilution was used in 5% NFDm/TBST at 4°C overnight. Goat Anti-Rabbit IgG - HRP Secondary Antibody (HA1001) at 1/50,000 dilution was used for 1 hour at room temperature.

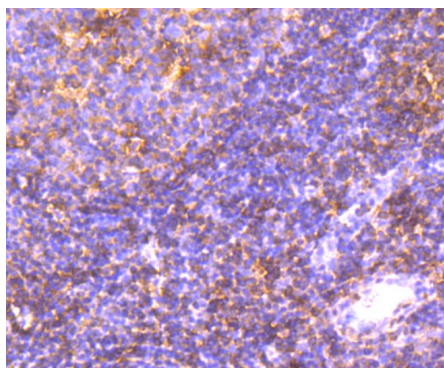
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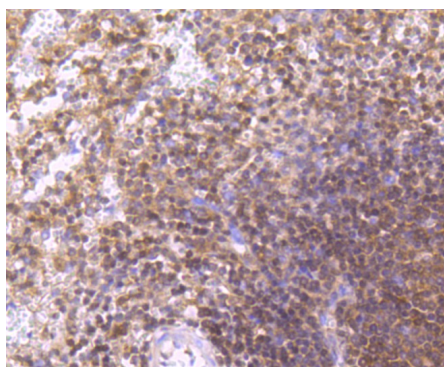
Technical:0086-571-89986345

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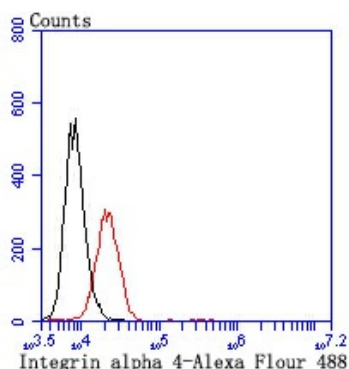
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**Fig3:** Immunohistochemical analysis of paraffin-embedded human tonsil tissue using anti-Integrin alpha 4 antibody. The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0) for 20 minutes. The tissues were blocked in 1% BSA for 30 minutes at room temperature, washed with ddH<sub>2</sub>O and PBS, and then probed with the primary antibody (ET1704-31, 1/50) for 30 minutes 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 spleen tissue using anti-Integrin alpha 4 antibody. 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 30 minutes at room temperature, washed with ddH<sub>2</sub>O and PBS, and then probed with the primary antibody (ET1704-31, 1/50) for 30 minutes 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 Integrin alpha 4 was done on Jurkat cells. The cells were fixed, permeabilized and stained with the primary antibody (ET1704-31, 1/50) (red). After incubation of the primary antibody at room temperature for an hour, the cells were stained with a Alexa Fluor®488 conjugate-Goat anti-Rabbit IgG Secondary antibody at 1/1000 dilution for 30 minutes. Unlabelled sample was used as a control (cells without incubation with primary antibody; black).

**Note:** All products are "FOR RESEARCH USE ONLY AND ARE NOT INTENDED FOR DIAGNOSTIC OR THERAPEUTIC USE".

### Background References

1. Totsuka N et al. Toll-like receptor 4 and MAIR-II/CLM-4/LMIR2 immunoreceptor regulate VLA-4-mediated inflammatory monocyte migration. *Nat Commun* 5:4710 (2014).
2. Qi J et al. Identification, characterization, and epitope mapping of human monoclonal antibody J19 that specifically recognizes activated integrin  $\alpha 4$ . *J Biol Chem* 287:15749-59 (2012).

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