

## ITGA4 Polyclonal Antibody

|                  |        |               |                    |
|------------------|--------|---------------|--------------------|
| Catalog No       | E90696 | Lot Number    | P00009             |
| Applications     | WB IHC | Quantity      | 100ul, 100ug/100ul |
| Cross-Reactivity | H M R  | Calculated MW | 115kDa             |

### Immunogen Information

|            |                                    |
|------------|------------------------------------|
| Immunogen  | Recombinant protein of human ITGA4 |
| Gene ID    | 3676                               |
| Swiss Prot | P13612                             |
| Synonyms   | ITGA4;CD49D;IA4;MGC90518 ;         |

### Product information

|         |   |
|---------|---|
| Species | Rabbit  |
| Isotype | IgG   |
| Purity  | Affinity purification   |
| Storage | Store at -20°C or -80°C. Avoid freeze / thaw cycles.<br>Buffer: PBS with 0.02% sodium azide, 50% glycerol, pH7.3. |

### Background

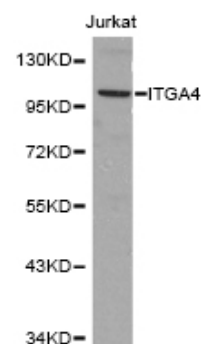
Integrins are  $\alpha/\beta$  heterodimeric cell surface receptors that play a pivotal role in cell adhesion and migration, as well as in growth and survival (1,2). The integrin family contains at least 18  $\alpha$  and 8  $\beta$  subunits that form 24 known integrins with distinct tissue distribution and overlapping ligand specificities (3). Integrins not only transmit signals to cells in response to the extracellular environment (outside-in signaling), but also sense intracellular cues to alter their interaction with the extracellular environment (inside-out signaling) (1,2). A pair of important  $\alpha 4$  integrins,  $\alpha 4\beta 1$  and  $\alpha 4\beta 7$ , interact with VCAM-1, fibronectin, and MAdCAM-1 at cell adhesions (3). Gene knockout and antibody blocking research reveal that  $\alpha 4$  integrins play important roles in embryonic liver and heart development and in fetal lymphocyte homing (4-6). Phosphorylation at Ser988 within the cytoplasmic tail of integrin  $\alpha 4$  blocks binding to paxillin and promotes leading edge migration (7,8). On SDS-PAGE, integrin  $\alpha 4$  can migrate at several different apparent molecular sizes, a 150 kDa mature protein and a 140 kDa precursor protein (a 180 kDa protein also exists under mild non-reducing conditions) (9). Integrin  $\alpha 4$  has a cleavage site at Arg558, which results in a small portion of the protein as either an 80 kDa N-terminal or 70 kDa C-terminal fragment (10).

### References

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7. Nishiya, N. et al. (2005) Nat Cell Biol 7, 343-52.
8. Alon, R. et al. (2005) J Cell Biol 171, 1073-84.
9. Teixido, J. et al. (1992) J Biol Chem 267, 1786-91.
10. Pujades, C. et al. (1996) Biochem J 313 ( Pt 3), 899-908.

### Recommended Dilutions

|     |                |
|-----|----------------|
| WB  | 1:500 - 1:2000 |
| IHC | 1:50- 1:200    |



Western blot analysis of Jurkat cell lysate using ITGA4 antibody.