

AP23258PU-N

Polyclonal Antibody to CD49a / ITGA1 (N-term) - Aff - Purified

Alternate names:

CD49 antigen-like family member A, ITGA-1, Integrin alpha-1, Laminin and Collagen Receptor, VLA-1, VLA1

Quantity:

0.1 mg

Background:

Integrin alpha 1 (ITGA1) chain associates with the beta 1 (ITGB1) chain to form a heterodimer that functions as a dual laminin/collagen receptor in neural cells and hematopoietic cells. ITGA1 has a 06-amino acid I domain in its N-terminal half, followed by 3 divalent cation-binding sites and a -terminal transmembrane domain with a short cytoplasmic tail. It also has 28 potential N-glycosylation sites. Human ITGA1 was expressed in a mouse fibroblast cell line as a 180-kD protein. ITGA1 is involved in the early remodeling of osteoarthritic cartilage and plays an essential role in the regulation of mesenchymal stem cell proliferation and cartilage production. It also plays an essential role in the regulation of MSC proliferation and cartilage production.

Uniprot ID:

[P56199](#)

NCBI:

[NP_852478](#)

GeneID:

[3672](#)

Host / Isotype:

Rabbit / IgG

Immunogen:

A synthetic peptide corresponding to a sequence at the N-terminal of human ITGA1, identical to the related rat and mouse sequences.

Format:

State: Lyophilized purified Ig fraction

Purification: Immunoaffinity Chromatography

Buffer System: 50% Glycerol, 0.9mg NaCl, 0.2mg Na₂HPO₄

Reconstitution: Restore with 0.2 ml of distilled water to a concentration of 500 µg/ml

Applications:

Western blot: Use at 0.1-0.5 µg/ml with the appropriate system to detect ITGA1 in cells and tissues.

Other applications not tested. Optimal dilutions are dependent on conditions and should be determined by the user.

Specificity:

This antibody detects CD49a / ITGA1 at N-term. No cross reactivity with other proteins.

Species Reactivity:

Tested: Human, Rat.

Expected from sequence similarity: Mouse.

Storage:

Store undiluted at 2-8°C for one month or (in aliquots) at -20°C for longer.

Avoid repeated freezing and thawing.

Shelf life: one year from despatch.

General Readings:

1. Douville P, Seldin MF, Carbonetto S. Genetic mapping of the integrin alpha 1 gene (Vla1) to mouse chromosome 13. Genomics. 1992 Oct;14(2):503-5. PubMed PMID: 1427867.

2. Lee HJ, Kim SY, Koh JM, Bok J, Kim KJ, Kim KS, et al. Polymorphisms and haplotypes of integrin alpha1 (ITGA1) are associated with bone mineral density and fracture risk in postmenopausal Koreans. Bone. 2007 Dec;41(6):979-86. Epub 2007 Sep 5. PubMed

PMID: 17931993.

3. Ekholm E, Hankenson KD, Uusitalo H, Hiltunen A, Gardner H, Heino J, et al. Diminished callus size and cartilage synthesis in alpha 1 beta 1 integrin-deficient mice during bone fracture healing. *Am J Pathol.* 2002 May;160(5):1779-85. PubMed PMID: 12000729.

Pictures:

Western blot analysis of Hela cell lysate using ITGA1 antibody

