

Integrin alpha 5 beta 1 Protein, Human (Biotinylated, HEK293, His-Avi)

Cat. No.:	HY-P700755
Synonyms:	Integrin alpha 5 beta 1; VLA-5; ITGA5&ITGB1; Integrin alpha 5 β 1; α 5 β 1
Species:	Human
Source:	HEK293
Accession:	P08648 (F42-Y995)&P05556 (Q21-D728)
Gene ID:	3678&3688
Molecular Weight:	110-140 kDa

PROPERTIES

Biological Activity	Immobilized 0.5 μ g Anti-ITGA5&ITGB1 Antibody, hFc Tag at 0.5 μ g/ml (100 μ l/Well) on the plate. Dose response curve for Biotinylated Human ITGA5&ITGB1, His Tag with the EC ₅₀ of 55.3ng/ml determined by ELISA.
Appearance	Lyophilized powder.
Formulation	Lyophilized from a 0.22 μ m filtered solution of PBS, pH 7.4. Normally 8% trehalose is added as protectant before lyophilization.
Endotoxin Level	<1 EU/ μ g, determined by LAL method.
Reconstitution	It is not recommended to reconstitute to a concentration less than 100 μ g/mL in ddH ₂ O.
Storage & Stability	Stored at -20°C for 2 years. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer (with carrier protein). It is recommended to freeze aliquots at -20°C or -80°C for extended storage.
Shipping	Room temperature in continental US; may vary elsewhere.

DESCRIPTION

Background

The Integrin alpha-5/beta-1 protein (ITGA5:ITGB1) functions as a versatile receptor with diverse ligand interactions. Recognizing the R-G-D sequence in its ligands, ITGA5:ITGB1 serves as a receptor for fibronectin and fibrinogen, mediating cell adhesion through distinct binding sites. Notably, it binds to PLA2G2A at a site separate from its classical ligand-binding site, inducing conformational changes that enhance ligand binding. Additionally, ITGA5:ITGB1 acts as a receptor for fibrillin-1 (FBN1), facilitating R-G-D-dependent cell adhesion. It is also a receptor for fibronectin (FN1), enabling R-G-D-dependent cell adhesion to FN1. Furthermore, ITGA5:ITGB1 serves as a receptor for IL1B, playing a crucial role in IL1B signaling. In the context of microbial infection, ITGA5:ITGB1 acts as a receptor for Human metapneumovirus, highlighting its involvement in pathogen recognition. Moreover, ITGA5:ITGB3 acts as a receptor for soluble CD40LG, playing a vital role in CD40/CD40LG signaling. This broad spectrum of ligand interactions underscores the multifunctionality of ITGA5:ITGB1 in cellular processes and signaling pathways.

Caution: Product has not been fully validated for medical applications. For research use only.

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