

Integrin beta-1/CD29 Protein, Human (HEK293, His)

Cat. No.:	HY-P70257
Synonyms:	rHuIntegrin beta-1/ITGB1, His; Integrin Beta-1; Fibronectin Receptor Subunit Beta; VLA-4 Subunit Beta; CD29; ITGB1; FNRB; MDF2; MSK12
Species:	Human
Source:	HEK293
Accession:	P05556 (Q21-D728)
Gene ID:	3688
Molecular Weight:	100-145 kDa

PROPERTIES

AA Sequence

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QT DENRCLKA   NAKSCGECIQ   AGPNCGWCTN   STFLQEGMPT
SAR CDDLEAL   KKKGCPPDDI   ENPRGSKDIK   KNKNVTNRSK
GTA EKLPED    ITQIQPQQLV   LRLRSGEPQT   FTLKFKRAED
YPI DLYY LMD   LSY SMKDDLE   NVKSLGTDLM   NEMRRITSD F
RIG FGSFVEK   TVMPYISTTP   AKLRNPCTSE   QNCTSPFSYK
NVL SLTNKG E   VFNELVGKQR   ISGNLDSPEG   GFDAIMQVAV
CGS LIGWRNV   TRLLVFSTDA   GFHFAGDGKL   GGIVLPNDGQ
CHL ENNMYTM   SHYYDYPSIA   HLVQKLSENN   IQTIFAVTEE
FQP VYKELKN   LIPKSAVGT L   SANS SNVIQL   IIDAYNSLSS
EVI LENGKLS   EGV TISYKSY   CKNGVNGTGE   NGRKCSNIS I
GDE VQFEISI   TSNKCPKKDS   DSFKIRPLGF   TEEVEVILQY
ICE CECQSEG   IPESPKCHEG   NGTFECGACR   CNEGRVGRHC
ECSTDEVNSE   DMDAYCRKEN   SSEICSNNGE   CVCGQCVC RK
RDNTNEIYSG   KFCECDNFNC   DRSNGLICGG   NGVCKCRVCE
CNP NYTGSA C   DCSLDTSTCE   ASNGQICNGR   GICECGVCKC
TDP KFQGQTC   EMCQTCLGVC   AEHKECVQCR   AFNKGEKKDT
CTQ ECSYFNI   TKVESRDKLP   QPVQPD PVSH   CKEKDVDDCW
FYFTYSVNGN   NEVMVHVVEN   PECPTGPD

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Biological Activity Measured by its binding ability in a functional ELISA. Immobilized human Fibronectin, at 2 µg/mL (100 µL/well) can bind Biotinylated Human CD29 protein. The ED₅₀ for this effect is 306.6 ng/mL.

Appearance Lyophilized powder.

Formulation Lyophilized from a 0.2 µm filtered solution of PBS or 20 mM PB, 150 mM NaCl, pH 7.4.

Endotoxin Level <1 EU/µg, determined by LAL method.

Reconstitution It is not recommended to reconstitute to a concentration less than 100 µg/mL in ddH₂O. For long term storage it is recommended to add a carrier protein (0.1% BSA, 5% HSA, 10% FBS or 5% Trehalose).

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 beta-1/CD29 protein, forming heterodimers with various alpha subunits, serves as a versatile receptor for a multitude of extracellular matrix proteins. Integrins alpha-1/beta-1, alpha-2/beta-1, alpha-10/beta-1, and alpha-11/beta-1 recognize collagen, while Integrins alpha-2/beta-2, alpha-3/beta-1, alpha-4/beta-1, alpha-5/beta-1, alpha-8/beta-1, alpha-10/beta-1, alpha-11/beta-1, and alpha-V/beta-1 act as receptors for fibronectin. Additionally, Integrin alpha-5/beta-1 serves as a receptor for fibrinogen, and Integrins alpha-1/beta-1, alpha-2/beta-1, alpha-6/beta-1, and alpha-7/beta-1 are receptors for laminin. Specific integrins, such as alpha-4/beta-1 and alpha-9/beta-1, play roles in recognizing VCAM1 and other ligands, contributing to diverse cellular functions including migration, adhesion, and angiogenesis. Beta-1 integrins, recognizing the R-G-D sequence, are implicated in various physiological processes, such as osteoblast compaction, cell motility, and cytokinesis completion. Furthermore, Integrin beta-1/CD29 plays a key role in facilitating cell invasion, matrix degradation, and myoblast differentiation, highlighting its significance in cellular adhesion, signaling, and developmental processes.

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

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