

ITGA5 Protein, Human (HEK293, His)

Cat. No.:	HY-P72533
Synonyms:	Integrin Alpha-5; Fibronectin Receptor Subunit Alpha; Integrin Alpha-F; VLA-5; CD49e; ITGA5; FNRA
Species:	Human
Source:	HEK293
Accession:	P08648 (F42-Y995)
Gene ID:	3678
Molecular Weight:	Approximately 130 kDa

PROPERTIES

AA Sequence

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F N L D A E A P A V   L S G P P G S F F G   F S V E F Y R P G T   D G V S V L V G A P
K A N T S Q P G V L   Q G G A V Y L C P W   G A S P T Q C T P I   E F D S K G S R L L
E S S L S S S E G E   E P V E Y K S L Q W   F G A T V R A H G S   S I L A C A P L Y S
W R T E K E P L S D   P V G T C Y L S T D   N F T R I L E Y A P   C R S D F S W A A G
Q G Y C Q G G F S A   E F T K T G R V V L   G G P G S Y F W Q G   Q I L S A T Q E Q I
A E S Y Y P E Y L I   N L V Q G Q L Q T R   Q A S S I Y D D S Y   L G Y S V A V G E F
S G D D T E D F V A   G V P K G N L T Y G   Y V T I L N G S D I   R S L Y N F S G E Q
M A S Y F G Y A V A   A T D V N G D G L D   D L L V G A P L L M   D R T P D G R P Q E
V G R V Y V Y L Q H   P A G I E P T P T L   T L T G H D E F G R   F G S S L T P L G D
L D Q D G Y N D V A   I G A P F G G E T Q   Q G V V F V F P G G   P G G L G S K P S Q
V L Q P L W A A S H   T P D F F G S A L R   G G R D L D G N G Y   P D L I V G S F G V
D K A V V Y R G R P   I V S A S A S L T I   F P A M F N P E E R   S C S L E G N P V A
C I N L S F C L N A   S G K H V A D S I G   F T V E L Q L D W Q   K Q K G G V R R A L
F L A S R Q A T L T   Q T L L I Q N G A R   E D C R E M K I Y L   R N E S E F R D K L
S P I H I A L N F S   L D P Q A P V D S H   G L R P A L H Y Q S   K S R I E D K A Q I
L L D C G E D N I C   V P D L Q L E V F G   E Q N H V Y L G D K   N A L N L T F H A Q
N V G E G G A Y E A   E L R V T A P P E A   E Y S G L V R H P G   N F S S L S C D Y F
A V N Q S R L L V C   D L G N P M K A G A   S L W G G L R F T V   P H L R D T K K T I
Q F D F Q I L S K N   L N N S Q S D V V S   F R L S V E A Q A Q   V T L N G V S K P E
A V L F P V S D W H   P R D Q P Q K E E D   L G P A V H H V Y E   L I N Q G P S S I S
Q G V L E L S C P Q   A L E G Q Q L L Y V   T R V T G L N C T T   N H P I N P K G L E
L D P E G S L H H Q   Q K R E A P S R S S   A S S G P Q I L K C   P E A E C F R L R C
E L G P L H Q Q E S   Q S L Q L H F R V W   A K T F L Q R E H Q   P F S L Q C E A V Y
K A L K M P Y R I L   P R Q L P Q K E R Q   V A T A V Q W T K A   E G S Y
  
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Appearance Lyophilized powder.

Formulation Lyophilized from a 0.2 µm filtered solution of 20 mM PB, 150 mM NaCl, pH 7.2.

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 ddH ₂ O. 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 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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