Integrin alpha 8 beta 1 Protein, Human (HEK293, Flag, His)

Cat. No.:	HY-P73869
Synonyms:	Integrin alpha 8 beta 1; ITGA8; ITGB1
Species:	Human
Source:	HEK293
Accession:	P53708 (F39-L1012)&P05556-1 (Q21-D728)
Gene ID:	8516& 3688
Molecular Weight:	Approximately 85-140 kDa

PROPERTIES

AA Sequence

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

	G D G K L G G I V L P N D G Q C H L E N N M Y T M S H Y Y D Y P S I A H L V Q K L S E N N I Q T I F A V T E E F Q P V Y K E L K N L I P K S A V G T L S A N S S N V I Q L I I D A Y N S L S S E V I L E N G K L S E G V T I S Y K S Y C K N G V N G T G E N G R K C S N I S I G D E V Q F E I S I T S N K C P K K D S D S F K I R P L G F T E E V E V I L Q Y I C E C E C Q S E G I P E S P K C H E G N G T F E C G A C R C N E G R V G R H C E C S T D E V N S E D M D A Y C R K E N S S E I C S N N G E C V C G Q C V C R K R D N T N E I Y S G K F C E C D N F N C D R S N G L I C G G N G V C K C R V C E C N P N Y T G S A C D C S L D T S T C E A S N G Q I C N G R G I C E C G V C K C T D P K F Q G Q T C E M C Q T C L G V C A E H K E C V Q C R A F N K G E K K D T C T Q E C S Y F N I T K V E S R D K L P Q P V Q P D P V S H C K E K D V D D C W F Y F T Y S V N G N N E V M V H V V E N P E C P T G P D
Biological Activity	Measured by its binding ability in a functional ELISA. Immobilized Human Fibronectin, at 5 μg/mL (100 μL/well) can bind Biotinylated Human Integrin alpha 8 beta 1 protein. The ED_{50} for this effect is 428.7 ng/mL
Appearance	Lyophilized powder
Formulation	Lyophilized from a 0.2 μm filtered solution of 20 mM PB, 150 mM NaCl, pH 7.4.
Endotoxin Level	<1 EU/μg, determined by LAL method.
Reconsititution	It is not recommended to reconstitute to a concentration less than 100 μg/mL in ddH_2O. 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-8/beta-1 protein plays a crucial role in organogenesis, particularly in the development of the kidney and potentially other organs, by orchestrating the recruitment of mesenchymal cells into epithelial structures. Recognizing the R-G-D sequence within a broad spectrum of ligands, including TNC, FN1, SPP1, TGFB1, TGFB3, and VTN, Integrin alpha-8/beta-1 is implicated in diverse cellular interactions critical for organ formation. In kidney genesis, NPNT is identified as its likely functional ligand. Acting as a neuronal receptor for TNC, it regulates cell-cell interactions and modulates the neurite outgrowth of sensory and motor neurons. Structurally, Integrin alpha-8/beta-1 forms a heterodimer, with the alpha subunit comprising a heavy and a light chain linked by a disulfide bond. Specifically, the alpha-8 subunit associates with the beta-1 subunit, underscoring its integral role in mediating cell-matrix and cell-cell interactions during organ development and neural processes.

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