

## LRP-6 Protein, Human (HEK293, mFc)

Cat. No.:	HY-P77990
Synonyms:	LRP-6; DCAD2; FLJ90062; FLJ90421
Species:	Human
Source:	HEK293
Accession:	O75581 (A20-P630)
Gene ID:	4040
Molecular Weight:	100-120 kDa

### PROPERTIES

#### AA Sequence

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

1. Immobilized Human LRP-6, mFc Tag at 5 µg/mL (100 µl/Well) on plate. Dose response curve for Biotinylated Human SOST, His Tag with the EC<sub>50</sub> of <2.1 µg/mL determined by ELISA.

2. Immobilized Biotinylated Human SOST, His Tag at 5 µg/mL (100µl/well) on the streptavidin precoated plate (5 µg/mL). Dose response curve for Human LRP-6, mFc Tag with the EC<sub>50</sub> of ≤0.17 µg/mL determined by ELISA.

#### Appearance

Lyophilized powder

#### Formulation

Lyophilized from 0.22 µm filtered solution in PBS (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 ddH<sub>2</sub>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**

As an integral component of the Wnt-Fzd-LRP5-LRP6 complex, LRP-6 protein plays a crucial role in initiating beta-catenin signaling by orchestrating the aggregation of receptor-ligand complexes into ribosome-sized signalosomes. Functioning as a cell-surface coreceptor in Wnt/beta-catenin signaling, it is particularly pivotal in bone formation. The complex formed by Wnt-induced Fzd/LRP6 coreceptor recruits DVL1 polymers to the plasma membrane, facilitating the recruitment of the AXIN1/GSK3B complex to the cell surface. This, in turn, promotes the formation of signalosomes, inhibiting AXIN1/GSK3-mediated phosphorylation and destruction of beta-catenin. LRP-6 is indispensable for the posterior patterning of the epiblast during gastrulation. The protein engages in a myriad of interactions, including those with various WNT proteins, FZD5, DKK1, DRAXIN, AXIN1, GRB10, RSPO1, RSPO3, SOST, MESD, CSNK1E, MACF1, DAB2, TMEM198, CAPRIN2, LYPD6, KREM1, and MDK, highlighting its versatility and regulatory roles in the Wnt signaling pathway.

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

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