CD131 Protein, Rat (HEK293, Fc)

Cat. No.:	HY-P76195
Synonyms:	Cytokine receptor common subunit beta; CD131; CSF2RB; IL3RB; IL5RB
Species:	Rat
Source:	HEK293
Accession:	Q78ZF5 (E29-W440)
Gene ID:	171081
Molecular Weight:	Approximately 80-95 kDa due to the glycosylation.

PROPERTIES

AA Sequence	E E T V P L K T L Q C Y N D Y I E R I I C S W A D T E D A Q G L V N L T L Y H W L D K K Q P M S C E L S E D L M W S E C P S S H R C V P R R C V L P Y T Q F S V S K E D Y Y S L Q P D R D L S I H L V V P L A Q H V Q P P P P K D I S I S P S G D H F L L K W S V P L G D A Q V S L L S Q K D I Q F E V A Y K Q L Q D S W E D A S S L H T C N L W V T L E P K L F L P N S I Y V A R V R A Q L A P G S S L S G R P S G W S P E V H W D S P T E D K A R P Q N L Q C F F D G I Q S L N C S W E V W T K V T D S V S F G L F Y S S S P K A G E K K C S P V V K E L Q A S R Y T R Y H C S L N V S D P A A H S Q Y T V S V K R L E Q G K F I E S F N H I Q M N P P T L N L T K N R D S Y S L H W E T Q K M S Y P F I Q H A F Q V Q Y K K K L D R W E D S K T E N L N H A H S M D L P Q L E P G T S Y C A R V R V K T I P E Y K G L W S E W S N E C T W T T D W
Biological Activity	Measured by its binding ability in a functional ELISA. Recombinant Human CD131 binds Recombinant Human GM⊠CSF in the presence of Recombinant Human GM⊠CSF R alpha (1μg/mL). The ED_{50} for this effect is 65.39 ng/mL.
Appearance	Lyophilized powder.
Formulation	Lyophilized from a 0.2 μm filtered solution of PBS, 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	CD131, a cell surface receptor, plays a pivotal role in immune response by controlling the production and differentiation of hematopoietic progenitor cells into lineage-restricted cells. Through the formation of a heterodimeric receptor with various partners such as IL3RA, IL5RA, or CSF2RA, CD131 engages in multiple signaling pathways, including interleukin-3, interleukin-5, and granulocyte-macrophage colony-stimulating factor/CSF2 pathways. In unstimulated conditions, CD131 constitutively interacts with JAK1, and ligand binding leads to JAK1 stimulation, triggering the activation of the JAK-STAT pathway. CD131 forms a heterodimer composed of an alpha and a beta subunit, with the beta subunit being common to the IL3, IL5, and GM-CSF receptors. The GM-CSF receptor complex, involved in signaling, is a dodecamer consisting of two head-to-head hexamers of two alpha, two beta, and two ligand subunits. CD131 further interacts with TMEM102, FCER1G, LYN, and JAK1, contributing to its intricate role in cellular responses.

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