

## CD131 Protein, Human (HEK293, His)

Cat. No.:	HY-P75608
Synonyms:	Cytokine receptor common subunit beta; CDw131; CD131; CSF2RB; IL3RB; IL5RB
Species:	Human
Source:	HEK293
Accession:	P32927 (W17-W443)
Gene ID:	1439
Molecular Weight:	50-55 kDa

### PROPERTIES

Appearance	Lyophilized powder.
Formulation	Lyophilized from a 0.2 µm filtered solution of PBS, pH 7.4. Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween 80 are added as protectants before lyophilization.
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.
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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**Caution: Product has not been fully validated for medical applications. For research use only.**

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