

DESCRIPTION

Source Chinese Hamster Ovary cell line, CHO-derived human IL-20R alpha protein
Val30-Lys250, with a C-terminal 6-His tag
Accession # Q9UHF4.2

N-terminal Sequence Analysis Val30

Predicted Molecular Mass 26 kDa

SPECIFICATIONS

SDS-PAGE 34-45 kDa, under reducing conditions.

Activity Measured by its binding ability in a functional ELISA.
When Recombinant Human IL-20R alpha His-tag (Catalog # 11239-IR) is immobilized at 0.5 µg/mL (100 µL/well), Recombinant Human IL-26/AK155 Dimer (Catalog # 1870-IL) binds with an ED₅₀ of 3.00-30.0 ng/mL.

Endotoxin Level <0.10 EU per 1 µg of the protein by the LAL method.

Purity >95%, by SDS-PAGE visualized with Silver Staining and quantitative densitometry by Coomassie® Blue Staining.

Formulation Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details.

PREPARATION AND STORAGE

Reconstitution Reconstitute at 500 µg/mL in PBS.

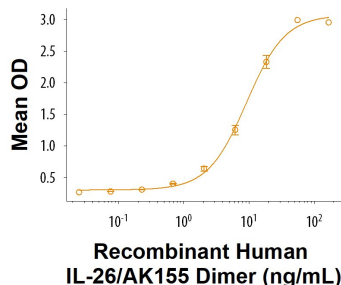
Shipping The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.

Stability & Storage Use a manual defrost freezer and avoid repeated freeze-thaw cycles.

- 12 months from date of receipt, -20 to -70 °C as supplied.
- 1 month, 2 to 8 °C under sterile conditions after reconstitution.
- 3 months, -20 to -70 °C under sterile conditions after reconstitution.

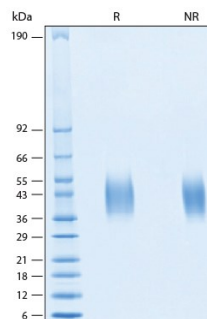
DATA

Binding Activity



Recombinant Human IL-20R alpha His-tag Protein Binding Activity. When Recombinant Human IL-20R alpha His-tag Protein (Catalog # 11239-IR) is immobilized at 0.5 µg/mL (100 µL/well), Recombinant Human IL-26/AK155 Dimer Protein (Catalog # 1870-IL) binds with an ED₅₀ of 3.00-30.0 ng/mL.

SDS-PAGE



Recombinant Human IL-20R alpha His-tag Protein SDS-PAGE. 2 µg/lane of Recombinant Human IL-20R alpha His-tag Protein (Catalog # 11239-IR) was resolved with SDS-PAGE under reducing (R) and non-reducing (NR) conditions and visualized by Coomassie® Blue staining, showing bands at 34-45 kDa.

BACKGROUND

IL-20 receptor alpha (IL-20 R α), also named IL-20 R1, CRF2-8, and ZCYTOR7, belongs to the class II cytokine receptor family, which includes 12 members. These receptors are characterized by the patterns of conserved amino acid (aa) residues in their extracellular domains, which are composed of tandem fibronectin type III domains (1). Class II cytokine receptors form heterodimeric signaling receptor complexes that mediate class II cytokine signals. Subunits of the different receptor complexes are shared and serve multiple functions (1). The gene for human IL-20 R α is mapped to chromosome 6 and encodes a 553 aa glycoprotein with a 29 aa signal peptide, a 221 aa extracellular domain, a 24 aa transmembrane region and a 279 aa intracellular domain (2). IL-20 R α is widely expressed and is detected at high levels in multiple tissues including skin, testis, heart, placenta, salivary gland and prostate gland (1). The expression of IL-20 R α , together with that of IL-20 R β , is upregulated in psoriatic skin lesions on keratinocytes, immune cells, and endothelial cells (1, 2). IL-20 R α heterodimerizes with IL-20 R β to form the functional receptor that mediates IL-19, IL-20 and IL-24 signals (3, 4). IL-20 R α also heterodimerizes with IL-10 R β to form the functional receptor complex for IL-26 (5). Binding of these IL-10 family class II cytokines to their functional receptors induces activation of the JAK-STAT signal transduction pathway. At low ligand concentrations, STAT3 has been shown to be the predominant STAT proteins activated through either complexes (3 - 5).

References:

1. Kotenko, S.V. (2003) Cytokine & Growth Factor Reviews **13**:223.
2. Xie, M.H. *et al.* (2000) J. Biol. Chem. **275**:31335.
3. Dumoutier, L. *et al.* (2001) J. Immunol. **167**:3534.
4. Parrish-Novak, J. *et al.* (2002) J. Biol. Chem. **277**:47517s.
5. Sheikh, F. *et al.* (2004) J. Immunol. **172**:2006.