



#### DESCRIPTION

<b>Source</b>	Mouse myeloma cell line, NS0-derived		
	Human IL-20 R $\alpha$ (Val30 - Lys250) Accession # Q9UHF4	DIEGRMD	Human IgG <sub>1</sub> (Pro100 - Lys330)
	N-terminus		C-terminus
<b>N-terminal Sequence Analysis</b>	Val30		
<b>Structure / Form</b>	Disulfide-linked homodimer		
<b>Predicted Molecular Mass</b>	52 kDa (monomer)		

#### SPECIFICATIONS

<b>SDS-PAGE</b>	70-85 kDa, reducing conditions
<b>Activity</b>	Measured by its binding ability in a functional ELISA. Immobilized rhIL-20 R $\alpha$ /Fc Chimera at 1 $\mu$ g/mL (100 $\mu$ L/well) can bind rhIL-26 with a linear range of 0.3-20 ng/mL.
<b>Endotoxin Level</b>	<0.10 EU per 1 $\mu$ g of the protein by the LAL method.
<b>Purity</b>	>90%, by SDS-PAGE under reducing conditions and visualized by silver stain.
<b>Formulation</b>	Lyophilized from a 0.2 $\mu$ m filtered solution in PBS. See Certificate of Analysis for details.

#### PREPARATION AND STORAGE

<b>Reconstitution</b>	Reconstitute at 100 $\mu$ g/mL in sterile PBS.
<b>Shipping</b>	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.
<b>Stability &amp; Storage</b>	<b>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</b> <ul style="list-style-type: none"><li>• 12 months from date of receipt, -20 to -70 °C as supplied.</li><li>• 1 month, 2 to 8 °C under sterile conditions after reconstitution.</li><li>• 3 months, -20 to -70 °C under sterile conditions after reconstitution.</li></ul>

#### BACKGROUND

IL-20 receptor alpha (IL-20 R $\alpha$ ), 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 $\alpha$  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 $\alpha$  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 $\alpha$ , together with that of IL-20 R $\beta$ , is upregulated in psoriatic skin lesions on keratinocytes, immune cells, and endothelial cells (1, 2).

IL-20 R $\alpha$  heterodimerizes with IL-20 R $\beta$  to form the functional receptor that mediates IL-19, IL-20 and IL-24 signals (3, 4). IL-20 R $\alpha$  also heterodimerizes with IL-10 R $\beta$  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.