Recombinant Human IL-24

Catalog Number: 1965-IL

DESCRIPTION

Source	Mouse myeloma cell line, NS0-derived Met28-Leu206, with a C-terminal 10-His tag Accession # Q13007
N-terminal Sequence Analysis	Gln52 predicted, no results obtained, sequencing might be blocked.
Predicted Molecular Mass	19.5 kDa

SPECIFICATIONS

SDS-PAGE	35 kDa, reducing conditions
Activity	Measured in a cell proliferation assay using BaF3 mouse pro−B cells transfected with human IL-20 Rα and human IL-20 Rβ. The ED_{50} for this effect is typically 0.1-0.3 ng/mL.
Endotoxin Level	<0.10 EU per 1 µg of the protein by the LAL method.
Purity	>90%, by SDS-PAGE under reducing conditions and visualized by silver stain.
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS with BSA as a carrier protein. See Certificate of Analysis for details.

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 10 µg/mL in sterile PBS containing at least 0.1% human or bovine serum albumin.
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.

BACKGROUND

Interleukin 24 (IL-24), also known as mda-7 (melanoma differentiation associated gene-7), is a member of the IL-10 family of helical cytokines. The IL-24 gene encodes a precursor protein of 207 amino acids (aa) that contains a 48 aa signal sequence and an 18 kDa, 158 aa mature segment. There are three potential N-linked glycosylation sites, at least one of which is used. When secreted, IL-24 is a 35 - 40 kDa phosphorylated glycoprotein that apparently can exist as either a monomer or dimer. It is suggested that glycosylation is essential for activity. Mature human IL-24 shares 69% aa sequence identity with mouse and rat IL-24. Human IL-24 is also active in rodent systems. Cells known to express IL-24 include B cells, $CD4^+$ T cells, NK cells, lymph node dendritic cells, monocytes, melanocytes, and melanoma cells. Functionally, IL−24 has diverse activities. At low concentrations on monocytes, it induces type I proinflammatory cytokines such as IFN-γ, IL-1β, IL-12 and TNF-α. At high concentrations, it is a strong inducer of apoptosis in tumor cells, but not normal cells. IL-24 also has anti-angiogenic properties. It directly binds IL-24 receptors on endothelial cells, activating STAT3 and blocking their differentiation. IL-24 binds and signals through two heterodimeric receptor complexes. One complex is the combination of IL−20 Rα and IL-20 Rβ, which is shared with IL-19 and IL−20. The second complex is a combination of IL−22 R and IL-20 Rβ, which is shared with IL-20.

References:

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6. Chen, J. *et al.* (2003) Molec. Ther. **8**:220.