



Interleukin-24, human recombinant (rHuIL-24)

Catalog No: 95047
Lot No: XXXXX
Source: *Saccharomyces cerevisiae*
Synonyms: C49A, FISP, MDA7, ST16, IL-24, IL10B, Mob-5, MDA-7, Suppression of tumorigenicity 16 protein, Melanoma differentiation-associated gene 7 protein

Background

IL24 is a member of the IL10 family of cytokines. It was identified as a gene induced during terminal differentiation in melanoma cells. IL-10B encoded can induce apoptosis selectively in various cancer cells. Overexpression IL-24 leads to elevated expression of several GADD family genes, which correlates with the induction of apoptosis. The phosphorylation of mitogen-activated protein kinase 14 (MAPK7/P38), and heat shock 27 kDa protein 1 (HSPB2/HSP27) are found to be induced by this gene in melanoma cells, but not in normal immortal melanocytes. Alternatively spliced transcript variants encoding distinct isoforms have been reported. The glycosylation is essential for activity of IL-24. Functionally, IL-24 has diverse activities. At low concentrations, it induces type I proinflammatory cytokines such as IFN-g, IL-1b, IL-12 and TNF-a. At high concentration, it is a strong inducer of apoptosis in tumor cells, but not normal cells. mda-7/IL-24 is being hailed as a 'magic bullet' for cancer gene therapy.

Description

Interleukin 24 human recombinant produced in yeast is a single, glycosylated, polypeptide chain containing 158 amino acids and having a molecular mass of 18 kDa. As a result of glycosylation, the protein migrates at 19.5 kDa on SDS-PAGE.

Physical Appearance

Sterile filtered white lyophilized (freeze-dried) powder.

Formulation

Lyophilized from a 0.2 µm filtered solution in PBS with BSA as a carrier.

Solubility

It is recommended to reconstitute the lyophilized Interleukin-24 in sterile 18 MΩ-cm H₂O not less than 100 µg/ml, which can then be further diluted to other aqueous solutions.

Stability

Lyophilized MDA7, although stable at room temperature for 3 weeks, should be stored desiccated below -18°C. Upon reconstitution MDA-7 Recombinant should be stored at 4°C between 2-7 days and for future use below -18°C. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA). Please prevent freeze-thaw cycles.

Purity

Greater than 98.0% as determined by (a) Analysis by RP-HPLC, (b) Analysis by SDS-PAGE.

Activity

Measured by its ability to bind to the cell receptor of Capan-1 cells line resulted in Stat-3 activation. The ED50 for this effect is typically 1.0 ng/ml, corresponding to a specific activity of 1 x 10⁶ units/mg.

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