

Recombinant Human IFN-β Protein(Halo Tag)

Catalog Number: GPMH0462

Note: Centrifuge before opening to ensure complete recovery of vial contents.

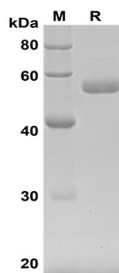
Description

Species	Human
Source	Mammalian-derived Human IFN-β proteins Met22-Asn187, with an C-terminal Halo
Calculated MW	51.1 kDa
Observed MW	55 kDa
Accession	P01574
Bio-activity	Not validated for activity

Properties

Purity	> 95% as determined by reducing SDS-PAGE.
Endotoxin	< 1.0 EU/mg of the protein as determined by the LAL method
Storage	Generally, lyophilized proteins are stable for up to 12 months when stored at -20 to -80 °C. Reconstituted protein solution can be stored at 4-8°C for 2-7 days. Aliquots of reconstituted samples are stable at < -20°C for 3 months.
Shipping	This product is provided as lyophilized powder which is shipped with ice packs.
Formulation	Lyophilized from a 0.2 μm filtered solution in PBS with 5% Trehalose and 5% Mannitol.
Reconstitution	It is recommended that sterile water be added to the vial to prepare a stock solution of 0.5 mg/mL. Concentration is measured by UV-Vis.

Data



SDS-PAGE analysis of Human IFN-β proteins, 2μg/lane of Recombinant Human IFN-β proteins was resolved with SDS-PAGE under reducing conditions, showing bands at 55 KD

Background

Interferons (IFNs) are natural glycoproteins belonging to the cytokine superfamily and are produced by the cells of the immune system of most vertebrates in response to challenges by foreign agents such as viruses, parasites, and tumor cells. Interferon-beta (IFN beta) is an extracellular protein mediator of host defense and homeostasis. IFN beta has well-established direct antiviral, antiproliferative, and immunomodulatory properties. Recombinant IFN beta is approved for the treatment of relapsing-remitting multiple sclerosis. The recombinant IFN beta protein has the theoretical potential to either treat or cause autoimmune neuromuscular disorders by altering the complicated and delicate balances within the immune system networks. It is the most widely prescribed disease-modifying therapy for multiple sclerosis (MS). Large-scale clinical trials have established the clinical efficacy of IFN beta in reducing relapses and slowing disease progression in relapsing-remitting MS. IFN beta therapy was shown to be comparably beneficial for opticospinal MS (OSMS) and conventional MS in Japanese. IFN beta is effective in reducing relapses in secondary progressive MS and may have a modest effect in slowing disability progression. In addition to the common antiviral activity, IFN beta also induces increased production of the p53 gene product which promotes apoptosis and thus has a therapeutic effect against certain cancers. The role of IFN-beta in bone metabolism could warrant its systematic evaluation as a potential adjunct to therapeutic regimens of osteolytic diseases. Furthermore, IFN beta might play a beneficial role in the development of chronic progressive CNS inflammation.