

Recombinant Rat IFNB Protein

For Research Use Only

1. Basic Product Information

Catalog No.: REP52418

Size: 10ug, 100ug

Protein Name: Interferon beta (IFN-beta)

Synonym: Ifnb1, Ifnb

UniProt ID: P70499

UniProt Link: www.uniprot.org/uniprotkb/P70499/entry

Species Source: Rat

Expression System: HEK293T eukaryotic cell expression system Sequence

Length: 184 AA

Molecular Weight: 22 KD

Protein Tag: C-terminal His6

2. Amino Acid Sequence

MANRWTLHIAFLLCFSTTALSIDYKQLQFRQSTSIRTCQKLLRQLNGRLNLSYRTDFKIPMEVMHPSQ
MEKSYTAFAIQVMLQNVFLVFRSNFSSTGWNETIVESLLDELHQQTELLEILKEKQEERLTWVTSTTT
LGLKSYYWRVQRYLKDKKYNSYAWMVVRAEVFRNFSIILRLNRNFQN

3. Buffer Composition

Liquid format: PBS-based buffer containing 50% glycerol. Glycerol concentration can be customized upon customer request; please state special requirements when placing your order.

Lyophilized format: Buffer before lyophilization is PBS supplemented with 6% trehalose.

4. Storage Conditions

Upon receipt, store the product at -20 °C or -80 °C. Aliquot the product for on-demand use to preserve protein activity and prevent denaturation and inactivation caused by repeated freeze-thaw cycles.

5. Product Description

This product is recombinant Interferon beta (IFN-beta) produced using the HEK293T eukaryotic cell expression system. It is suitable for in-vitro functional assays, protein-protein interaction studies, antibody preparation and other biomedical research applications.

Protein Function: Type I interferon cytokine that plays a key role in the innate immune response to infection, developing tumors and other inflammatory stimuli. Signals via binding to high-affinity (IFNAR2) and low-affinity (IFNAR1) heterodimeric receptor, activating the canonical Jak-STAT signaling pathway resulting in transcriptional activation or repression of interferon-regulated genes that encode the effectors of the interferon response, such as antiviral proteins, regulators of cell proliferation and differentiation, and immunoregulatory proteins (By similarity). Signals mostly via binding to a IFNAR1-IFNAR2 heterodimeric receptor, but can also function with IFNAR1 alone and independently of Jak-STAT pathways. Elicits a wide variety of responses, including antiviral and antibacterial activities, and can regulate the development of B-cells, myelopoiesis and lipopolysaccharide (LPS)-inducible production of tumor necrosis factor. Plays a role in neuronal homeostasis by regulating dopamine turnover and protecting dopaminergic neurons: acts by promoting neuronal autophagy and alpha-synuclein clearance, thereby preventing dopaminergic neuron loss. IFNB1 is more potent than interferon-alpha (IFN-alpha) in inducing the apoptotic and antiproliferative pathways required for control of tumor cell growth (By similarity).

Subcellular Localization: Secreted .

6. Notes

- Avoid repeated freeze-thaw cycles to maintain protein stability and biological activity.
- Please specify special buffer-composition requirements at the time of order placement.
- For research use only. Not intended for clinical diagnosis, therapeutic use or commercial manufacturing.