



# Recombinant Protein Technical Manual

## Recombinant Human IFNAR2/IFNABR Protein (His Tag)(Active)

RPES4442

### Product Data:

**Product SKU:** RPES4442

**Size:** 50µg

**Species:** Human

**Expression host:** HEK293 Cells

**Uniprot:** NP\_997468.1

### Protein Information:

**Molecular Mass:** 26.2 kDa

**AP Molecular Mass:** 45 kDa

**Tag:** C-His

**Bio-activity:** Measured by its ability to inhibit rh IFN $\beta$  mediated protection of WISH Human amnion cells infected with vesicular stomatitis virus (VSV) to viral lysis. The EC50 for this effect is typically 1-4µg/mL.

**Purity:** > 95 % as determined by reducing SDS-PAGE.

**Endotoxin:** < 1.0 EU per µg as determined by the LAL method.

**Storage:** 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 sterile PBS, pH 7.4

**Reconstitution:** Please refer to the printed manual for detailed information.

**Application:**

**Synonyms:** IFN-alpha-REC;IFN-R;IFNABR;IFNARB

## Immunogen Information:

**Sequence:** Met 1-Lys 243

## Background:

Interferon-alpha/beta receptor beta chain (IFNAR2) is a type I membrane protein that forms one of the two chains of a receptor for interferons alpha and beta. Binding and activation of the receptor stimulates Janus protein kinases, which in turn phosphorylate several proteins, including STAT1 and STAT2. Initial cell-surface IFNAR2 expression at diagnosis assessed by flow cytometry widely distributed but showed overall significantly higher expression in CML patients when compared with normal controls. In 15 fresh patients who subsequently received IFN $\alpha$  therapy, IFNAR2 expression at diagnosis was significantly higher in cytogenetic good responders than in poor responders. Down-regulation of IFNAR2 expression during IFN $\alpha$  therapy was observed only in good responders but not in poor responders. The encoded protein also functions as an antiviral factor. IFNAR2 may associate with IFNAR1 to form the type I interferon receptor. This protein serves as a receptor for interferons alpha and beta. IFNAR2 is also involved in IFN-mediated STAT1, STAT2 and STAT3 activation. Isoform 1 and isoform 2 are directly involved in signal transduction due to their association with the TYR kinase, JAK1. Isoform 3 is a potent inhibitor of type I IFN receptor activity. Following binding of IFN $\alpha$ 2, IFNAR2 is internalized, but, instead of being routed towards degradation as it is when complexed to IFN $\beta$ , it recycles back to the cell surface.