

DESCRIPTION

Source	Mouse myeloma cell line, NS0-derived		
	Human IFN- α / β R2 (Ile27-Lys243) Accession # P48551	IEGRMD	Human IgG ₁ (Pro100-Lys330)
	N-terminus		C-terminus
N-terminal Sequence Analysis	Ile27		
Structure / Form	Disulfide-linked homodimer		
Predicted Molecular Mass	51.3 kDa (monomer)		

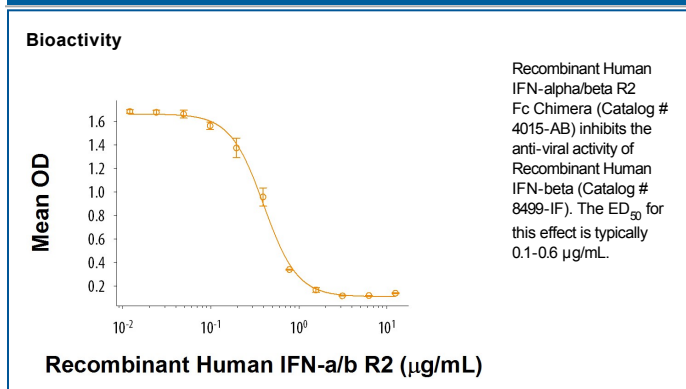
SPECIFICATIONS

SDS-PAGE	71-76 kDa, reducing conditions
Activity	Measured by its ability to inhibit Type-I IFN-mediated anti-viral activity. The ED ₅₀ for this effect, as measured by inhibition of Recombinant Human IFN- β (Catalog # 8499-IF) , is typically 0.1-0.6 μ g/mL
Endotoxin Level	<0.01 EU per 1 μ g of the protein by the LAL method.
Purity	>95%, by SDS-PAGE under reducing conditions and visualized by silver stain.
Formulation	Lyophilized from a 0.2 μ m filtered solution in PBS. See Certificate of Analysis for details.

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 500 μ g/mL in sterile PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	<p>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</p> <ul style="list-style-type: none"> ● 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.

DATA



BACKGROUND

IFN- α / β R2, also known as IFNAR2, is a 100 kDa glycoprotein in the class II cytokine receptor family. These proteins form heterodimeric receptor complexes that transduce signals from the interferon, IL-10, and IL-28 families of cytokines (1, 2). IFN- α / β R2, in association with IFN- α / β R1, is required for mediating the antiviral, antiproliferative, and apoptotic effects of the type I interferons IFN- α and IFN- β . IFN- α / β R2 is the principal ligand binding subunit of the receptor. Ligand binding is stabilized by the subsequent association with IFN- α / β R1, resulting in the formation of a signaling ternary receptor complex (3, 4). Mature human IFN- α / β R2 consists of a 217 amino acid (aa) extracellular domain (ECD) with two fibronectin type III repeats, a 21 aa transmembrane segment, and a 251 aa cytoplasmic domain. Alternate splicing generates a secreted isoform that corresponds to the ECD and a 50 kDa transmembrane isoform with a substituted and truncated cytoplasmic region (5, 6). The short isoform is impaired in its ability to activate signaling molecules and functions as a dominant negative receptor subunit (7 - 9). IFN- α / β R2 is also subject to presenilin-dependent intramembrane proteolysis, resulting in the liberation of nearly the entire ECD as well as the cytoplasmic domain which migrates to the nucleus and can inhibit gene transcription (10). High concentrations of soluble IFN- α / β R2 bind and neutralize IFN- α and IFN- β , while lower concentrations prolong the antiviral activity of circulating IFN- β but not IFN- α (11). Human but not mouse IFN- α / β R2 constitutively associates with STAT4, which may account for species specific differences observed in type I interferon responses (12). Within the ECD, human IFN- α / β R2 shares 63%, 60%, and 48% aa sequence identity with bovine, mouse, and ovine IFN- α / β R2, respectively.

References:

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