Recombinant Cynomolgus Monkey IFN-α/β R1 His-tag

Catalog Number: 10674-AB

DESCRIPTION

Source	Human embryonic kidney cell, HEK293-derived cynomolgus monkey IFN-alpha/beta R1 protein Ala23-Ile439, with a C-terminal 6-His tag Accession # EHH61907.1
N-terminal Sequence Analysis	Ala23 & Gly26
Predicted Molecular Mass	48 kDa

SPECIFICATIONS

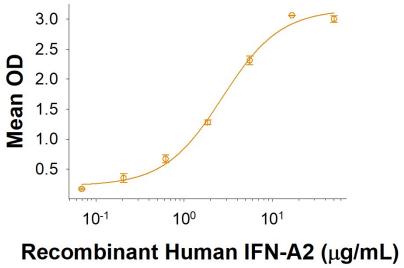
SDS-PAGE	80-100 kDa, under reducing conditions
Activity	Measured by its binding ability in a functional ELISA. When Recombinan Cynomolgus Monkey IFN-α/β R1 His-tag protein is immobilized at 10 µg/mL (100 µL/well), Recombinant Human IFN-A2 binds with an ED_{50} of 1-6 µg/mL.
Endotoxin Level	<0.10 EU per 1 µg of the protein by the LAL method.
Purity	>95%, by SDS-PAGE visualized with Silver Staining and quantitative densitometry by Coomassie® Blue Staining.
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details.

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 500 µg/mL in PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	**Use a manual defrost freezer and avoid repeated freeze-thaw cycles.** • 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.

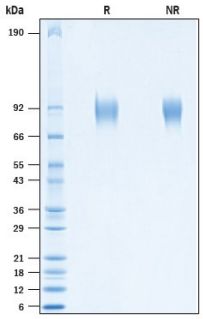
DATA

Binding Activity



Recombinant Cynomolgus Monkey IFN-alpha/beta R1 Protein Binding Activity. When Recombinant Cynomolgus Monkey IFN-α/β R1 His-tags protein is immobilized at 10 µg/mL (100 µL/well), Recombinant Human IFN-A2 binds with an ED_{50} of 1-6 ug/mL.

SDS-PAGE



Recombinant Cynomolgus Monkey IFN-alpha/beta R1 Protein SDS-PAGE. 2 µg/lane of Recombinant Cynomolgus Monkey IFN-alpha/beta R1 Protein, CF (Catalog # 10674-AB) was resolved with SDS-PAGE under reducing (R) and non-reducing (NR) conditions and visualized by Coomassie® Blue staining, showing bands at 80-100 kDa.

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Global bio-techne.com info@bio-techne.com techsupport@bio-techne.com TEL +1 612 379 2956
USA TEL 800 343 7475 Canada TEL 855 668 8722 China TEL +86 (21) 52380373
Europe | Middle East | Africa TEL +44 (0)1235 529449

Recombinant Cynomolgus Monkey IFN-α/β R1 His-tag

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BACKGROUND

Interferon-alpha/beta receptor 1 (IFN-α/β R1), also known as IFNAR1, is a member of the class II cytokine receptor family of proteins. These proteins form heterodimeric receptor complexes that mediate class II cytokine signals and subunits of the different receptor complexes are shared and serve multiple functions (1). Mature human IFN-α/β R1 consists of an extracellular domain (ECD) with three tandem fibronectin type III repeats, a transmembrane segment, and a cytoplasmic domain (2). Within the ECD, human IFN-α/β R1 shares 47% and 50% amino acid sequence identity with mouse and rat IFN-α/β R1, respectively. Alternative splicing generates two additional isoforms that lack the transmembrane segment and either all or a portion of the cytoplasmic domain. IFN-α/β R1, in association with IFN-α/β R2, is required for propagating anti-microbial signal transduction triggered by the type 1 interferons such as IFN-α and IFN-β (3, 4). IFN-α/β R1 interacts very weakly or not at all with type 1 interferons and does not stably interact with IFN-α/β R2. Ligands preferentially associate with IFN-α/β R2, and this complex subsequently forms a stable ternary assembly with IFN-α/β R1 (5-7). IFN-α/β R1 also associates with IFN-γ R2 even in the absence of IFN-γ stimulation (3). IFN-α/β R1 activation depends on tyrosine phoshorylation as well as palmitoylation of its cytoplasmic domain (8, 9). Rapid down-regulation of the receptor is accomplished by ligand-dependent or -independent pathways (e.g. VEGF R signaling, TLR signaling, or cellular stress) which induce its serine phosphorylation, ubiquitination, and degradation (10-13).

References:

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