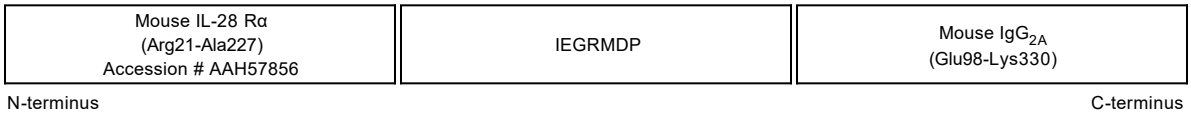
Recombinant Mouse IL-28 Rα/IFN-λ R1 Fc Chimera

Catalog Number: 5384-MR

DESCRIPTION

Source

Mouse myeloma cell line, NS0-derived



N-terminal Sequence Analysis	Arg21
Structure / Form	Disulfide-linked homodimer
Predicted Molecular Mass	50.6 kDa (monomer)

SPECIFICATIONS

SDS-PAGE	62-70 kDa, reducing conditions
Activity	Measured by its binding ability in a functional ELISA. 1 µg/mL of Recombinant Mouse IL-28 Rα/IFN-λ R1 Fc Chimera was mixed with serially diluted Recombinant Mouse (rm) IL-28B/IFN-λ3 (Catalog # 1789-ML). Following incubation, the IL-28 Rα rmIL-28B complex was captured in a goat anti-mFc-coated plate. Bound IL-28B was measured using biotinylated goat anti-mIL-28B. The concentration of rmIL-28B that produces 50% of the optimal binding was found to be approximately 0.7-3.5 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. See Certificate of Analysis for details.

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 200 µg/mL in sterile 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.

BACKGROUND

IL-28 Rα (IL-28 receptor alpha subunit; also named interferon-λ R1) is a type I transmembrane glycoprotein that is cytokine receptor family 2 member 12 (CRF2-12) (1-4). It pairs with the IL-10 receptor β subunit (IL-10 Rβ, CRF2-4) to form the IL-28 R (1-4). Each subunit of this receptor can interact with the interferon-like cytokines (type III interferons) IL-28A (IFN-λ2), IL-28B (IFN-λ3) and IL-29 (IFN-λ1). Mouse IL 28A and IL-28B share 97% amino acid (aa) identity; rodents do not express IL-29 (1-4). Mouse IL-28 Rα cDNA encodes a 535 aa protein with a 20 aa signal peptide, a 207 aa extracellular domain (ECD) with a fibronectin type III motif and four potential N-glycosylation sites, a 21 aa transmembrane sequence, and a proline-rich and acidic 287 aa cytoplasmic domain. A 254 aa splice variant of mouse IL 28 Rα diverges at aa 224 and lacks a transmembrane sequence (3, 5). The mature mouse IL-28 Rα ECD shares 83%, 67%, 64% and 63% aa sequence identity with rat, human, canine and bovine IL-28 Ra, respectively. Mouse IL-28 R will respond to human IL-28A (6). IL-28 R is constitutively expressed in most tissues, but its ligands are mainly produced by antigen presenting cells in response to viruses and their products (2-6). Signaling through IL-28 Rα is similar to that of receptors for type I IFNs and involve tyrosine phosphorylation, activation of JAK tyrosine kinases, STAT phosphorylation and formation of the IFN-stimulated regulatory factor 3 (ISGF-3) transcription factor complex (1-7). This signaling pathway induces antiviral activity and up-regulates MHC class I antigen expression (2-7). Anti-proliferative activity has also been shown for IL-28/IL-28 R (7).

References:

1. Chen, Q. *et al.* (2006) Vitam. Horm. **74**:207.
2. Meager, A. *et al.* (2005) Cytokine **31**:109.
3. Sheppard, P. *et al.* (2003) Nat. Immunol. **4**:63.
4. Kotenko, S.V. *et al.* (2003) Nat. Immunol. **4**:69.
5. Entrez Accession # EDL29971.
6. Lasfar, A. *et al.* (2006) Cancer Res. **66**:4468.
7. Dumoutier, L. *et al.* (2004) J. Biol. Chem. **279**:32269.

bio-techne®
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