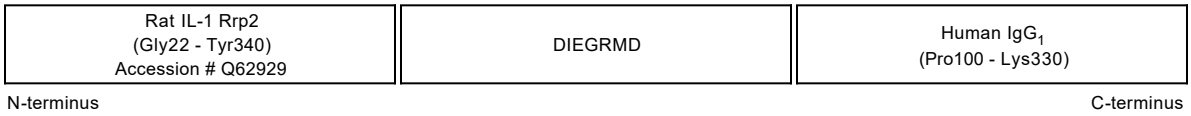
Recombinant Rat IL-1 Rrp2/IL-1 R6 Fc Chimera

Catalog Number: 573-RP

DESCRIPTION

Source Mouse myeloma cell line, NS0-derived



N-terminal Sequence Analysis	Gly22
Structure / Form	Disulfide-linked homodimer
Predicted Molecular Mass	63 kDa (monomer)

SPECIFICATIONS

SDS-PAGE	100 kDa, reducing conditions
Activity	Bioassay data are not available.
Endotoxin Level	<0.10 EU per 1 µg 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 µm filtered solution in PBS. See Certificate of Analysis for details.

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 100 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

The Interleukin 1 receptor family (IL-1 R) comprises at least eleven members including IL-1 RI (IL-1 R1), IL-1 RII (IL-1 R2), IL-1 RAcP (IL-1 R3), ST2 (T1/IL-1 R4), IL-18 Ra (IL-1 Rrp/IL-1 R5), IL-1 Rrp2 (IL-1 RL2/IL-1 R6), IL-18 Rb (AcPL/IL-1 R7), IL-1RAPL-1 (TIGIRR-2/IL-1 R8), and TIGIRR-1 (IL-1 R9) (1). All family members possess three immunoglobulin (Ig)-like domains in their extracellular region. Most members also have an intracellular TIR (Toll-like receptor/IL-1 receptor signaling) domain that is also conserved in the Toll-like receptor family. Related proteins, SIGIRR (single Ig domain-containing IL-1 R-related molecule) and IL-18BP, differ from the other members by having only one Ig domain (1). Rat IL-1 Rrp2 cDNA encodes a 561 amino acid (aa) residue precursor protein with a putative 21 aa signal peptide and a 319 aa extracellular domain. It shares 84% and 67% amino acid sequence identity with mouse and human IL-1 Rrp2, respectively. IL-1 Rrp2 is expressed in lung epitheium, brain vasculature, kidney, testis, monocytes, skin-derived keratinocytes, fibroblasts and, to a lesser extent, endothelial cells (2, 3). IL-1 Rrp2 has been shown to mediate the activation of the transcription factor NF-kB by the IL-1 family ligands IL-1 F6, F8 or F9 (also known as IL-1e), with IL-1 RAcP as a co-factor (3, 4). Response to IL-1 F9 is specifically antagonized by IL-1 F5 (also known as IL-1d), an IL-1 family ligand that is most closely related to IL-1ra (3). IL-1 Rrp2, IL-1 F5, and IL-1 F9 are all up-regulated in lesional psoriasis skin, suggesting that the IL-1 Rrp2 mediated signaling pathway may take part in local inflammatory responses (3).

References:

1. Boraschi, D. & A. Tagliabue (2006) Vitam. Horm. **74**:229.
2. Lovenberg, T. W. *et al.* (1996) J. Neuroimmunol. **70**:113.
3. Debets, R. *et al.* (2001) J. Immunol. **167**:1440.
4. Towne, J. E. *et al.* (2004) J. Biol. Chem. **279**:13677.

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