

DESCRIPTION

Source	Mouse myeloma cell line, NS0-derived human IL-18 R beta/IL-1 R7 protein		
	Human IL-18 R β (Phe20 - Arg356) Accession # O95256	DIEGRMD	Human IgG ₁ (Pro100 - Lys330)
	N-terminus		C-terminus
N-terminal Sequence Analysis	Phe20		
Structure / Form	Disulfide-linked homodimer		
Predicted Molecular Mass	65.1 kDa (monomer)		

SPECIFICATIONS

SDS-PAGE	78-93 kDa, reducing conditions
Activity	Measured by its ability to inhibit the IL-18-induced response of KG-1 human acute myelogenous leukemia cells in the presence of soluble Recombinant Human IL-18 R α /IL-1 R5 Fc Chimera (Catalog # 816-LR). The ED ₅₀ for this effect is 2-6 μ g/mL in the presence of 30 μ g/mL of soluble IL-18 R α /Fc Chimera and 40 ng/mL of human IL-18.
Endotoxin Level	<0.10 EU per 1 μ g of the protein by the LAL method.
Purity	>90%, 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 100 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	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-18, originally described as an interferon- γ inducing factor (IGIF), is a member of the IL-1 family of cytokines that has multiple immunoregulatory functions. It has potent IFN- γ inducing activities and plays a key role in the activation of T helper type 1 (Th1) responses. The functional IL-18 receptor complex consists of two components, the IL-18 R α (IL-1 R5) and IL-18 R β (also termed IL-1 R7 and AcPL) subunits. Both subunits are members of the IL-1 receptor superfamily. Although IL-18 R α by itself binds IL-18 with low-affinity and IL-18 R β does not bind IL-18 *in vitro*, co-expression of IL-18 R α and IL-18 R β is required for high-affinity binding and IL-18 responsiveness. Human IL-18 R β cDNA encodes a 599 amino acid (aa) residue precursor type I membrane protein with a 14 aa signal peptide, a 342 aa extracellular region containing three immunoglobulin-like domains, a single transmembrane domain and a 222 aa cytoplasmic domain. Human and mouse IL-18 R β share 65% aa sequence identity. The expression of IL-18 R β parallels that of IL-18 R α and is detected in numerous tissues including lung, spleen, leukocytes and colon.

References:

1. Born, T.L. *et al.* (1998) J. Biol. Chem. **273**:29445.
2. Okamura, H. *et al.* (2000) in *Cytokine Reference*, Vol. 2:1605, Academic Press.