

DESCRIPTION

Source Human embryonic kidney cell, HEK293-derived human IL-18 R beta/IL-1 R7 protein
Phe20-Arg356, with a C-terminal 6-His tag
Accession # O95256.1

N-terminal Sequence Analysis Phe20

Predicted Molecular Mass 39 kDa

SPECIFICATIONS

SDS-PAGE 46-61 kDa, under reducing conditions.

Activity Measured by its ability to inhibit IL-18-induced response of KG-1 human acute myelogenous leukemia cells in the presence of soluble Recombinant Human IL-18 R alpha/IL-1 R5 Fc Chimera (Catalog # 816-LR). The ED50 for this effect is 0.300-2.40 μ g/mL in the presence of 30.0 μ g/mL of soluble Recombinant Human IL-18 R alpha/IL-1 R5 Fc Chimera and 40 ng/mL of Recombinant Human IL-18/IL-1F4 Protein.

Endotoxin Level <0.10 EU per 1 μ g of the protein by the LAL method.

Purity >95%, by SDS-PAGE visualized with Silver Staining and quantitative densitometry by Coomassie® Blue Staining.

Formulation Supplied as a 0.2 μ m filtered solution in PBS with Trehalose. See Certificate of Analysis for details.

PREPARATION AND STORAGE

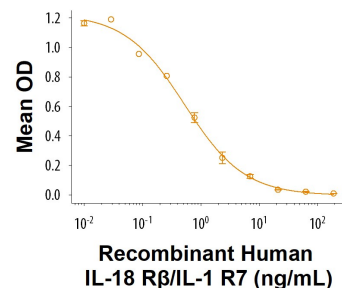
Shipping The product is shipped with dry ice or equivalent. Upon receipt, store it immediately at the temperature recommended below.

Stability & Storage Use a manual defrost freezer and avoid repeated freeze-thaw cycles.

- 6 months from date of receipt, -20 to -70 °C as supplied.
- 1 month, 2 to 8 °C under sterile conditions after opening.
- 3 months, -20 to -70 °C under sterile conditions after opening.

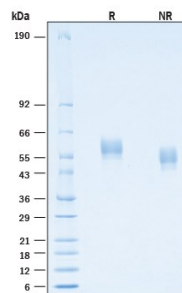
DATA

Bioactivity



Recombinant Human IL-18 R β /IL-1 R7 His-tag Protein Bioactivity. Measured by its ability to inhibit IL-18-induced response of KG-1 human acute myelogenous leukemia cells in the presence of soluble Recombinant Human IL-18 R alpha/IL-1 R5 Fc Chimera (Catalog # 816-LR). The ED₅₀ for this effect is 0.300-2.40 μ g/mL in the presence of 30.0 μ g/mL of soluble Recombinant Human IL-18 R alpha/IL-1 R5 Fc Chimera and 40 ng/mL of Recombinant Human IL-18/IL-1F4 Protein.

SDS-PAGE



Recombinant Human IL-18 R β /IL-1 R7 His-tag Protein SDS-PAGE. 2 μ g/lane of Recombinant Human IL-18 R β /IL-1 R7 His-tag Protein (Catalog # 11210-AP) was resolved with SDS-PAGE under reducing (R) and non-reducing (NR) conditions and visualized by Coomassie® Blue staining, showing bands at 46-61 kDa.

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.