

DESCRIPTION

Source *E. coli*-derived
Accession # P18510

Predicted Molecular Mass 17 kDa

SPECIFICATIONS

Activity Measured by its ability to inhibit IL-1 α -dependent proliferation in D10.G4.1 mouse helper T cells. Symons, J.A. *et al.* (1987) in Lymphokines and Interferons, a Practical Approach. Clemens, M.J. *et al.* (eds): IRL Press. 272.
The ED₅₀ for this effect is 5-40 ng/mL in the presence of 50 pg/mL of rhIL-1 α .

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

Purity >97%, 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.

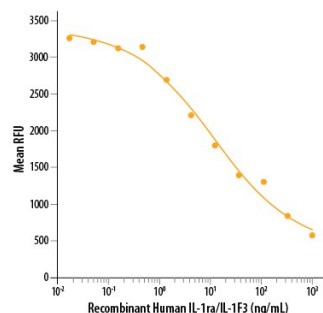
Shipping The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.

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.

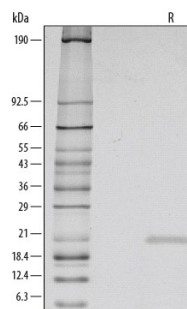
DATA

Bioactivity



Recombinant Human IL-1ra/IL-1F3 (Catalog # 280-RA/CF) inhibits IL-1 α -dependent cell proliferation of the D10.G4.1 mouse helper T cell line. The ED₅₀ for this effect is 5-40 ng/mL in the presence of 50 pg/mL of Recombinant Human IL-1 α /IL-1F1 (Catalog # 200-LA).

SDS-PAGE



1 μ g/lane of Recombinant Human IL-1ra/IL-1F3 was resolved with SDS-PAGE under reducing (R) conditions and visualized by silver staining, showing a single band at 20 kDa.

BACKGROUND

IL-1ra was originally isolated from the urine of patients with monocytic leukemia and has also been purified from adherent monocytes. The naturally occurring, fully glycosylated form has an apparent molecular weight of about 25,000 Daltons. The protein shows 26% amino acid homology to IL-1 β and 19% homology to IL-1 α . It will compete with either factor for receptor binding, but does not interact with either one. Human IL-1ra will bind to both types of IL-1 receptor (I and II) on human cells, but reportedly will not block binding to the type II receptor on murine pre-B cell lines. The recombinant, non-glycosylated form of IL-1ra blocks binding of IL-1 to its receptor equally as well as the naturally-occurring, glycosylated form. The IL-1ra has been shown to block the inflammatory responses induced by IL-1 both *in vitro* and *in vivo*. Currently, pre-clinical and clinical studies are underway to test possible therapeutic applications for IL-1ra in the treatment of sepsis, rheumatoid arthritis and chronic myelogenous leukemia.