

# Recombinant Mouse Interleukin-1 Receptor Antagonist Protein (Mouse IL-1RA)

## Product Information

Product Name	Cat#	Size
Recombinant Mouse Interleukin-1 Receptor Antagonist Protein	90141ES60	100 µg
(Mouse IL-1RA)	90141ES76	500 µg

## Product Description

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 beta and 19% homology to IL-1 alpha. 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. In mouse, IL-1 RII does not bind IL-1ra. 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. Pre-clinical and clinical studies were done to test possible therapeutic applications for IL-1ra in the treatment of sepsis, rheumatoid arthritis and chronic myelogenous leukemia.

## Product Properties

<b>Synonyms</b>	IL-1RN, IRAP
<b>Accession</b>	Q542W1
<b>GeneID</b>	16181
<b>Source</b>	E.coli-derived Mouse IL-1RA, Arg8-Gln159.
<b>Molecular Weight</b>	Approximately 17.3 kDa.
<b>AA Sequence</b>	RPSGKRPCCKM QAFRIWDTNQ KTFYLRNNQL IAGYLQGPNI KLEEKIDMVP IDLHSVFLGI HGGKLCCLSCA KSGDDIKLQL EEVNITDL SK NKEEDKRFTF IRSEKGPTTS FESAACPGWF LCTTLEADRP VSLTNTPEEP LIVTKFYFQE DQ
<b>Tag</b>	None
<b>Physical Appearance</b>	Sterile Filtered White lyophilized (freeze-dried) powder.
<b>Purity</b>	> 97% by SDS-PAGE and HPLC analyses.
<b>Biological Activity</b>	The ED <sub>50</sub> as determined by inhibiting IL-1α-dependent proliferation of murine D10S cells is less than 50 ng/mL, corresponding to a specific activity of > 2.0 × 10 <sup>4</sup> IU/mg in the presence of 50 pg/mL rHuIL-1α. Fully biologically active when compared to standard.
<b>Endotoxin</b>	< 1.0 EU per 1µg of the protein by the LAL method.
<b>Formulation</b>	Lyophilized from a 0.2 µm filtered concentrated solution in PBS, pH 7.4. We recommend that this vial be briefly centrifuged prior to opening to bring the contents to the bottom.
<b>Reconstitution</b>	Reconstitute in sterile distilled water or aqueous buffer containing 0.1% BSA to a concentration of 0.1-1.0 mg/mL. Stock solutions should be apportioned into working aliquots and stored at ≤ -20°C. Further dilutions should be made in appropriate buffered solutions.

## **Shipping and Storage**

The products are shipped with ice pack and can be stored at  $-20^{\circ}\text{C}$  to  $-80^{\circ}\text{C}$  for 1 year.

Recommend to aliquot the protein into smaller quantities when first used and avoid repeated freeze-thaw cycles.

## **Cautions**

1. Avoid repeated freeze-thaw cycles.
2. For your safety and health, please wear lab coats and disposable gloves for operation.
3. For research use only!