

Growth Factor Data Sheet

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Interleukin-1 receptor antagonist (IL1RN) was initially called the interleukin-1 (IL1) inhibitor, which is encoded by the IL1RN gene and is a member of the IL1 cytokine family. IL1RN is secreted by various types of cells, including immune cells, epithelial cells and adipocytes. In addition, IL1RN inhibits the activity of IL1 by binding to the receptor IL1R1 and preventing its association with the co-receptor IL1RAP for signaling. IL1RN is also used in the treatment of rheumatoid arthritis, an autoimmune disease in which IL1 plays a key role. The murine IL1RN is a single nonglycosylated polypeptide chain containing 152 amino acids and has been shown to block the inflammatory responses induced by IL1 both *in vitro* and *in vivo*. The protein shows 26% amino acid homology to IL1B and 19% homology to IL1A. It also shares 90% amino acid sequence identity with rat IL1RN.

Catalog Number Product Name	IL1RN (IL-1RA), Murine 1310-01C Recombinant Murine Interleukin-1RN IL1RN Interleukin 1RN
Source	<i>Escherichia coli</i>
MW	~17.3 kDa (152 amino acids)
Sequence	RPSGKRPCCKM QAFRIWDTNQ KTFYLRNNQL IAGYLQGPNI KLEEKIDMVP IDLHSVFLGI HGGKLCCLSCA KSGDDIKLQL EEVNITDLSK NKEEDKRFTF IRSEKGPPTS FESAACPGWF LCTTLEADRP VSLTNTPEEP LIVTKFYFQE DQ
Accession Number	Q542W1
Purity	>97% by SDS-PAGE and HPLC analyses
Biological Activity	Fully biologically active when compared to standard. The ED ₅₀ 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 ⁴ IU/mg in the presence of 50 pg/ml rHuIL-1α.
Formulation	Sterile filtered white lyophilized powder. Purified and tested for use in cell culture.
Storage/Handling	This lyophilized preparation is stable at 2-8°C, but should be kept at -20°C for long term storage. The reconstituted sample can be apportioned into working aliquots and stored at -80 °C for up to 6 months. Avoid repeated freeze/thaw cycles.
Reconstitution	The sample should be briefly centrifuged prior to opening to bring the contents to the bottom. Reconstitute in a siliconized tube using PBS that contains a 0.1% BSA to a concentration of 0.1-1.0 mg/mL. Reconstituted solutions are stable for up to one week at 2-8°C. Stock solutions should be aliquoted and stored at -80°C. Further dilutions should be made in appropriate buffered solutions containing BSA or serum.