

# Recombinant Equine Interleukin-1 Receptor Antagonist (req IL-1RA / IL1F3)

**Synonyms:** IL-1 inhibitor

**Introduction:** Interleukin-1RA is a member of the interleukin 1 cytokine family. This protein inhibits the activities of interleukin 1, alpha (IL1A) and interleukin 1, beta (IL1B), and modulates a variety of interleukin 1 related immune and inflammatory responses. This gene and five other closely related cytokine genes form a gene cluster spanning approximately 400 kb on chromosome 2. A polymorphism of this gene is reported to be associated with increased risk of osteoporotic fractures and gastric cancer. Four alternatively spliced transcript variants encoding distinct isoforms have been reported.

**Description:** Recombinant Equine Interleukin-1 Receptor Antagonist produced in E.coli cells is a single, non-glycosylated, polypeptide chain containing 152 amino acids and having a molecular mass of 17.4 kDa. The IL-1RA is purified by proprietary chromatographic techniques.

**Source:** *Escherichia Coli*.

**Physical Appearance:** Sterile filtered white lyophilized (freeze-dried) powder.

**Formulation:** lyophilized from a concentrated (1 mg/ml) sterile solution containing PBS, pH 7.4. The samples of 1 µg contain Trehalose 5% (w/vol) for better recovery

**Solubility:** It is recommended to reconstitute the lyophilized req IL-1RA in sterile H<sub>2</sub>O not less than 100 µg/ml, which can then be further diluted to other aqueous solutions.

**Stability:** Lyophilized req IL-1RA although stable at room temperature for 3 weeks, should be stored desiccated below -18° C. Upon reconstitution req IL-1RA should be stored at 4° C between 2-7 days and for future use below -18° C. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA). Please prevent freeze-thaw cycles.

**Purity:** Greater than 95.0% as determined by:

- (a) Analysis by RP-HPLC.
- (b) Analysis by SDS-PAGE.

**Amino acid sequence:** HPLGKRPKM QAFRIWDVNQ KTFYMRNNQL VAGYLQESNT KLQEKIDVVP IEPDALFLGL HGRKLCLACV KSGDEIRFQL EAVNITDLSK NKEENKRFTF IRSNSGPTTS FESAACPGWF LCTAQEADRP VSLTNKPKES FMVTKFYLQE DQ.

**Biological Activity:** The ED<sub>50</sub> as determined by inhibiting IL-1α-dependent proliferation of murine D10.G4.1 helper T cells is less than 3.0 µg/ml, corresponding to a specific activity of > 333 IU/mg in the presence of 50 pg/ml rHuIL-1α.

This material is offered for **research only**. Not for use in human. For in vitro use only. ImmunoTools will not be held responsible for patent infringement or other violations that may occur with the use of our products.

<i>small</i>	20 µg	Cat.N°	18344874
<i>medium</i>	100 µg	Cat.N°	18344876

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