

## Il1rn

### Recombinant Rat Interleukin-1 Receptor Antagonist

|                                 |   |                  |                        |
|---------------------------------|---|------------------|------------------------|
| <b>Catalog No.</b>              | CS499A<br>CS499B<br>CS499C  | <b>Quantity:</b> | 10 µg<br>50 µg<br>1 mg |
| <b>Alternate Names:</b>         | IL-1RN, IL-1RA, IL1 inhibitor; IRAP, interleukin-1 receptor antagonist protein  |                  |                        |
| <b>Description:</b>             | <p>IL-1RA was initially called the IL-1 inhibitor which is encoded by the IL1RN gene and it is a member of the interleukin 1 cytokine family. IL-1RA is secreted by various types of cells including immune cells, epithelial cells, and adipocytes. IL-RA has functions of inhibiting the activity of Interleukin-1 by binding to receptor IL1R1 and preventing its association with the coreceptor IL1RAP for signaling. IL-1RA is also used in the treatment of rheumatoid arthritis, an autoimmune disease in which IL-1 plays a key role. The rat IL-1RA is a single non-glycosylated polypeptide chain containing 152 amino acids and it has been shown to block the inflammatory responses induced by IL-1 both <i>in vitro</i> and <i>in vivo</i>. Rat IL-1RA shares 89 % and 73 % a.a. sequence homology with mouse and human IL-1RA.</p> <p>Recombinant Rat IL-1 Receptor Antagonist is a single non-glycosylated polypeptide chain containing 152 amino acids.</p> |                  |                        |
| <b>Gene ID:</b>                 | 60582   |                  |                        |
| <b>Source:</b>                  | <i>E. coli</i>  |                  |                        |
| <b>Molecular Weight:</b>        | 17.3 kDa  |                  |                        |
| <b>Formulation:</b>             | Lyophilized from a 0.2 µm filtered concentrated solution in PBS, pH 7.4.  |                  |                        |
| <b>Purity:</b>                  | >96 % by SDS-PAGE and HPLC analyses.  |                  |                        |
| <b>Endotoxin Level:</b>         | <1 EU/µg as determined by LAL method.   |                  |                        |
| <b>Biological Activity:</b>     | Fully biologically active when compared to standard. The ED <sub>50</sub> determined by inhibiting IL-1α-dependent proliferation of mouse D10S cells is less than 150 ng/ml.  |                  |                        |
| <b>Specific Activity:</b>       | >6.7 × 10E3 IU/mg in the presence of 50 pg/ml recombinant rat IL-1α.  |                  |                        |
| <b>Amino Acid Sequence:</b>     | HPAGKR PCKM QAFRIWDTNQ KTFYLRNNQL IAGYLQGPNT KLEEKIDMVP<br>IDFRNVFLGI HGGKLC LSCV KSGDDTKLQL EEVNITDLNK NKEEDKRFTF<br>IRSETGPTTS FESLACPGWF LCTTLEADHP VSLTNTPKPEP CTVTKFYFQE DQ  |                  |                        |
| <b>Reconstitution:</b>          | <b>Centrifuge vial prior to opening.</b> Add sterile distilled water or aqueous buffer to a concentration of 0.1-1.0 mg/ml. Further dilutions should be made in appropriate buffered solutions.   |                  |                        |
| <b>Storage &amp; Stability:</b> | This lyophilized preparation is stable at 2-4°C, but should be kept desiccated at -20°C for long term storage. Upon reconstitution, the preparation is stable for up to one week at 2-4°C. For maximal stability, apportion the reconstituted preparation into working aliquots and store at -20°C to -80°C. <b>Avoid repeated freeze/thaw cycles.</b>  |                  |                        |

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