



# Goat anti Equine IL1RN polyclonal antibody [Biotin] (CABT-L140)

This product is for research use only and is not intended for diagnostic use.

## PRODUCT INFORMATION

<b>Specificity</b>	Detects equine IL-1ra in ELISAs and Western blots. In sandwich ELISAs, approximately 20% cross-reactivity is observed with rmIL-1ra, less than 5% cross-reactivity with rrIL-1ra, less than 2% cross-reactivity with rpIL-1ra, and less than 0.4% cross-reactivity with rhIL-1ra is observed.
<b>Target</b>	IL-1ra/IL-1F3
<b>Immunogen</b>	Recombinant Equine IL-1ra/IL-1F3, His26-Gln177, Accession #O18999.1
<b>Isotype</b>	IgG
<b>Source/Host</b>	Goat
<b>Species Reactivity</b>	Equine
<b>Purification</b>	Antigen Affinity-purified
<b>Conjugate</b>	Biotin
<b>Applications</b>	ELISA(Det), WB
<b>Reconstitution</b>	Reconstitute at 0.2 mg/mL in sterile PBS.
<b>Format</b>	Lyophilized
<b>Size</b>	50 µg
<b>Buffer</b>	PBS with BSA
<b>Preservative</b>	None
<b>Storage</b>	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. 6 months, -20 to -70 °C under sterile conditions after reconstitution.

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**Ship**

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

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## BACKGROUND

**Introduction**

Secreted equine IL-1 receptor antagonist (IL-1ra) is a presumably 22-25 kDa glycoprotein produced by variety of cell types that antagonizes IL-1 activity. It is a member of the IL-1 family of proteins that includes IL-1 alpha and IL-1 beta. Although there is little amino acid (aa) identity among the three IL-1 family members, all molecules bind to the same receptors, all show a beta-trefoil structure, and all are believed to have evolved from a common ancestral gene. Equine IL-1ra is synthesized as a 177 aa precursor that contains a 25 aa signal sequence plus a 152 aa mature region. There is one intrachain disulfide bond and one potential N-linked glycosylation site. Mature equine sIL-1ra is 78%, 78%, 80%, 82%, and 76% aa identical to mature mouse, human, porcine, canine and bovine IL-1ra, respectively. In human, three non-secreted IL-1ra isoforms have also been identified. It is unknown if such an analogous situation exists in equine. Cells known to secrete IL-1ra include fibroblasts, vascular smooth muscle cells, intestinal columnar epithelium, chondrocytes, macrophages, mast cells, neutrophils and hepatocytes. There are two type I transmembrane glycoprotein receptors for IL-1ra. The first is the bioactive 80 kDa type I IL-1 receptor (IL-1 RI), and the second is the inert (decoy) 65 kDa type II IL-1 receptor. IL-1ra binding to IL-1 RI competitively blocks IL-1 (alpha or beta b) binding to the same receptor. This results in receptor ligation without activation. The type II IL-1 receptor is inert, and any binding of IL-1ra not only fails to block co-existing IL-1 activity, but may actually potentiate it by removing an IL-1 antagonist. Functionally, all activities attributed to IL-1ra are explained by its role as a competitive inhibitor of IL-1 binding to IL-1 RI.

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**Keywords**

DIRA;ICIL-1RA;IL1F3;IL-1F3;IL1ra;IL-1ra;IL-1ra3;IL1RN;IL-1RN;interleukin 1 receptor antagonist;IRAP;MVCD4

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