Mouse IL-34 Antibody

Monoclonal Rat IgG_{2A} Clone # 780310

Catalog Number: MAB5195

DESCRIPTION

Species Reactivity	Mouse
Specificity	Detects mouse IL-34 in ELISAs. In direct ELISAs, no cross-reactivity with recombinant human IL-34 is observed.
Source	Monoclonal Rat IgG_{2A} Clone # 780310
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Mouse myeloma cell line NS0-derived recombinant mouse IL-34 Asn21-Pro235 Accession # Q8R1R4
Endotoxin Level	<0.10 EU per 1 µg of the antibody by the LAL method.
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose.

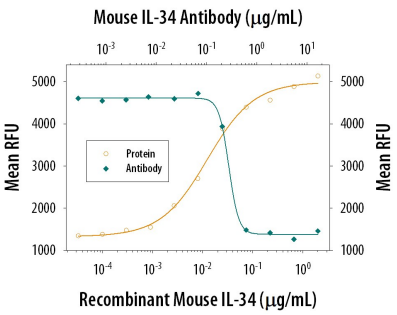
APPLICATIONS

Please Note: *Optimal dilutions should be determined by each laboratory for each application. General Protocols are available in the Technical Information section on our website.*

Neutralization	Measured by its ability to neutralize IL-34-induced proliferation in the M-NFS-60 mouse myelogenous leukemia lymphoblast cell line. The Neutralization Dose (ND_{50}) is typically 0.1-0.5 ug/mL in the presence of 100 ng/mL Recombinant Mouse IL-34.

DATA

Neutralization



Cell Proliferation Induced by IL-34 and Neutralization by Mouse IL-34 Antibody. Recombinant Mouse IL-34 induces proliferation in the M-NFS-60 mouse myelogenous leukemia lymphoblast cell line in the presence of in a dose-dependent manner (orange line), as measured by the Resazurin (Catalog # Catalog # AR002). Under these conditions, proliferation elicited by IL-34 is neutralized (green line) by increasing concen-trations of Rat Anti-Mouse IL-34 Monoclonal Antibody (Catalog # MAB5195). The ND_{50} is typically 0.1-0.5 ug/mL.

PREPARATION AND STORAGE

Reconstitution	Sterile PBS to a final concentration of 0.5 mg/mL.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	**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.

BACKGROUND

Interleukin 34 (IL-34; also known as uncharacterized protein C16orf77 homolog) is a 39 kDa, secreted cytokine that belongs to no known cytokine family (1). Mouse IL-34 is synthesized as a 235 amino acid (aa) precursor with a 20 aa signal sequence and a 215 aa mature chain that contains two potential sites for N-linked glycosylation. There are three isoforms for IL-34. Isoform 1 (Q8R1R4-1) is the recombinant mouse IL-34 described in this insert. Isoform 2 (Q8R1R4-2) has an 85 aa substitution for the final 101 aa in isoform 1, and isoform 3 (Q8R1R4-3) lacks Q81 in isoform 1. Mouse IL-34 shares 71% aa sequence identity with human IL-34. IL-34 is expressed in various tissues, including heart, brain, lung, liver, kidney, spleen, thymus, testes, ovary, small intestine, prostate, and colon, and it is most abundant in the spleen (1). The receptor for IL-34 is colony-stimulating factor 1 receptor (CSF-1R) (1). IL-34 stimulates monocyte viability (1). In functional studies, IL-34, like CSF-1, the other ligand for CSF-1R, stimulated phosphorylation of extracellular signal-regulated kinase-1 and -2 (ERK1/2) in human monocytes (1). In addition, IL-34 promoted the formation of the colony-forming unit-macrophage (CFU-M), a macrophage progenitor, in human bone marrow cultures (1).

References:

1. Lin, H. *et al.* (2008) Science **320**:807.

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