Human IL-13 Rα1 Antibody

Monoclonal Mouse IgG_{2B} Clone # 419718

Catalog Number: MAB1462

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human IL-13 Rα1 in direct ELISAs and Western blots. In direct ELISAs and Western blots, no cross-reactivity with recombinant mouse IL-13 Rα1, recombinant human (rh) IL-13 Rα2, rhIL-4 R, rhIL-5 Rβ, or rhIL-9 R is observed.
Source	Monoclonal Mouse IgG_{2B} Clone # 419718
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Mouse myeloma cell line NS0-derived recombinant human IL−13 Rα1 Ala27-Thr343 Accession # P78552
Formulation	Lyophilized from a 0.2 μm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied as a 0.2 μm filtered solution in PBS.

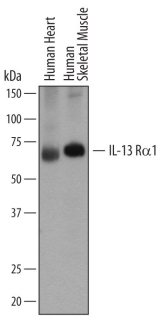
APPLICATIONS

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.*

	Recommended Concentration	Sample
Western Blot	2 µg/mL	See Below
Flow Cytometry	0.25 µg/10^6 cells	See Below
CyTOF-ready	Ready to be labeled using established conjugation methods. No BSA or other carrier proteins that could interfere with conjugation.	

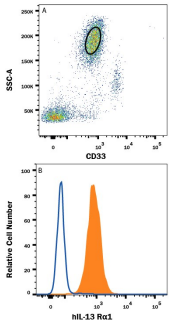
DATA

Western Blot



Detection of Human IL-13 Rα1 by Western Blot. Western blot shows lysates of human heart tissue and human skeletal muscle tissue. PVDF membrane was probed with 2 µg/mL of Mouse Anti-Human IL-13 Rα1 Monoclonal Antibody (Catalog # MAB1462) followed by HRP-conjugated Anti-Mouse IgG Secondary Antibody (Catalog # HAF007). A specific band was detected for IL-13 Rα1 at approximately 65 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 1.

Flow Cytometry



Detection of IL-13 Rα1 in Human Blood Granulocytes by Flow Cytometry. Human peripheral blood granulocytes were stained with (A) Mouse Anti-Human Siglec-3/CD33 APC-conjugated Monoclonal Antibody (Catalog # FAB1137A) and (B) Mouse Anti-Human IL-13 Rα1 Monoclonal Antibody (Catalog # MAB1462, filled histogram) or isotype control antibody (Catalog # MAB0041, open histogram), followed by Phycoerythrin-conjugated Anti-Mouse IgG F $(ab')_2$ Secondary Antibody (Catalog # F0102B).

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.5 mg/mL in sterile PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
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

Two type 1 membrane proteins belonging to the hemopoietin receptor family have been cloned and shown to bind IL-13 with differing affinities. The lower affinity IL-13 binding protein, previously designated IL-13 Rα, IL-13 Rα or NR4, is now referred to as IL-13 Rα1. The high-affinity IL-13 binding protein, previously also designated IL-13 R or IL-13 Rα', is now referred to as IL-13 Rα2.

The human IL-13 Rα1 was originally cloned based on sequence homology to the mouse IL-13 Rα1. The IL-13 Rα1 cDNA encodes a 427 amino acid (aa) precursor protein with a putative 21 aa signal peptide, a 324 aa extracellular domain, a 23 aa transmembrane region and a 59 aa cytoplasmic tail. Human and mouse IL-13 Rα1 share 76% aa sequence identity. The extracellular domain of IL-13 Rα1 is also closely related to that of IL-13 Rα2. IL-13 Rα1 has been shown to combine with the IL-4 Rα to form a high-affinity receptor complex capable of transducing an IL-13-dependent proliferative signal. The role of IL-13 Rα2 in IL-13 signaling remains to be elucidated.

References:

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2. Donaldson, D.D. *et al.* (1998) J. Immunol. **161**:2317.
3. Aman, M.J. *et al.* (1996) J. Biol. Chem. **271**:29265.
4. Hilton, D.J. *et al.* (1996) Proc. Natl. Acad. Sci. USA **93**:497.
5. Zhang, J.G. *et al.* (1997) J. Biol. Chem. **272**:9474.

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