Human IL-24 Antibody

Antigen Affinity-purified Polyclonal Goat IgG
Catalog Number: AF1965

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human IL-24 in direct ELISAs and Western blots.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	Mouse myeloma cell line NS0-derived recombinant human IL-24 Gln50-Leu206 Accession # Q2YHE5
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. See Certificate of Analysis for details. *Small pack size (-SP) is supplied either lyophilized or as a 0.2 µm filtered solution in PBS.

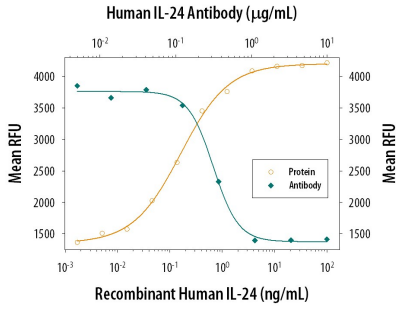
APPLICATIONS

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	0.1 µg/mL	Recombinant Human IL-24 (Catalog # 1965-IL)
Intracellular Staining by Flow Cytometry	2.5 µg/10^6 cells	Human peripheral blood mononuclear cells fixed with paraformaldehyde and permeabilized with saponin
CyTOF-ready	Ready to be labeled using established conjugation methods. No BSA or other carrier proteins that could interfere with conjugation.	
Neutralization	Measured by its ability to neutralize IL-24-induced proliferation in the BaF3 mouse pro-B cell line co-transfected with human IL-20 Rα and IL-20 Rβ. The Neutralization Dose (ND_{50}) is typically < 0.6 µg/mL in the presence of 2 ng/mL Recombinant Human IL-24.	

DATA

Neutralization



Cell Proliferation Induced by IL-24 and Neutralization by Human IL-24 Antibody. Recombinant Human IL-24 (Catalog # 1965-IL) stimulates proliferation in the BaF3 mouse pro-B cell line co-transfected with human IL-20 Rα and IL-20 Rβ in a dose-dependent manner (orange line). Proliferation elicited by Recombinant Human IL-24 (2 ng/mL) is neutralized (green line) by increasing concentrations of Goat Anti-Human IL-24 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF1965). The ND_{50} is typically < 0.6 µg/mL.

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.2 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.

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BACKGROUND

Interleukin 24 (IL-24), also known as mda-7 (melanoma differentiation associated gene-7), is a member of the IL-10 family of helical cytokines. The IL-24 gene encodes a precursor protein of 207 amino acids that contains a 48 amino acid (aa) signal sequence and an 18 kDa, 158 aa mature segment. There are three potential N-linked glycosylation sites, at least one of which is used. When secreted, IL-24 is a 35-40 kDa phosphorylated glycoprotein that apparently can exist as either a monomer or dimer. It is suggested that glycosylation is essential for activity. Mature human IL-24 shares 69% aa sequence identity with mouse and rat IL-24. Human IL-24 is also active in rodent systems. Cells known to express IL-24 include B cells, $CD4^+$ T cells, NK cells, lymph node dendritic cells, monocytes, melanocytes, and melanoma cells. Functionally, IL-24 has diverse activities. At low concentrations on monocytes, it induces type I proinflammatory cytokines such as IFN-γ, IL-1β, IL-12, and TNF-α. At high concentrations, it is a strong inducer of apoptosis in tumor cells but not normal cells. IL-24 also has anti-angiogenic properties. It directly binds IL-24 receptors on endothelial cells, activating STAT3 and blocking their differentiation. IL-24 binds and signals through two heterodimeric receptor complexes. One complex is the combination of IL-20 Rα and IL-20 Rβ, which is shared with IL-19 and IL-20. The second complex is a combination of IL-22 R and IL-20 Rβ, which is shared with IL-20.

References:

1. Jiang, H. *et al.* (1995) Oncogene **11**:2477.
2. Jiang, H. *et al.* (1996) Proc. Natl. Acad. Sci. USA **93**:9160.
3. Wang, M. *et al.* (2002) J. Biol Chem. **227**:7341.
4. Chada, S. *et al.* (2004) Int. Immunopharmacol. **4**:649.
5. Pestka, S. *et al.* (2004) Annu. Rev. Immunol. **22**:929.
6. Chen, J. *et al.* (2003) Molec. Ther. **8**:220.

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