

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human IL-24 in direct ELISAs and Western blots.
Source	Monoclonal Mouse IgG _{2B} Clone # 244202
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Mouse myeloma cell line NS0-derived recombinant human IL-24
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	1 µg/mL	Recombinant Human IL-24 (Catalog # 1965-IL)

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. <ul style="list-style-type: none"> ● 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 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 (aa) that contains a 48 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.* **277**: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.