Mouse IL-6R alpha Antibody

Monoclonal Rat IgG_1 Clone # 255820

Catalog Number: MAB18301

DESCRIPTION

Species Reactivity	Mouse
Specificity	Detects mouse IL-6R alpha in direct ELISAs and Western blots. In direct ELISAs and Western blots, no cross-reactivity with recombinant human IL-6 R is observed.
Source	Monoclonal Rat IgG_1 Clone # 255820
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Mouse myeloma cell line NS0-derived recombinant mouse IL-6R alpha Leu20-Glu357 Accession # P22272
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.

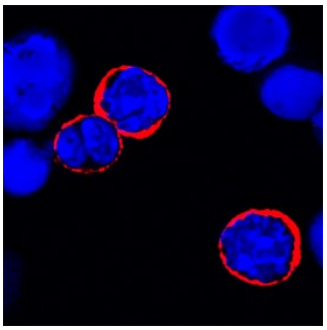
APPLICATIONS

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 Mouse IL-6R alpha (Catalog # 1830-SR)
Immunocytochemistry	8-25 µg/mL	See Below

DATA

Immunocytochemistry



IL-6R alpha in Mouse Splenocytes. IL-6R alpha was detected in immersion fixed mouse splenocytes using Rat Anti-Mouse IL-6R alpha Monoclonal Antibody (Catalog # MAB18301) at 15 µg/mL for 3 hours at room temperature. Cells were stained using the NorthernLights™ 557-conjugated Anti-Rat IgG Secondary Antibody (red; Catalog # Catalog # NL013) and counterstained with DAPI (blue). Specific staining was localized to cytoplasm. View our protocol for Fluorescent ICC Staining of Non-adherent Cells.

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.

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BACKGROUND

Interleukin 6 (IL-6) is a multifunctional cytokine that exerts its activities by binding to a high-affinity receptor complex consisting of two membrane glycoproteins: an 80 kDa ligand binding subunit (IL-6 Rα/CD126) and a 130 kDa nonligand-binding signal-transducing subunit (gp130/CD130) (1-4). The mouse IL-6 Rα cDNA encodes a precursor type I transmembrane protein of 460 amino acids (aa) that contains a 19 aa signal sequence, a 345 aa extracellular ligand binding domain, a 21 aa transmembrane region, and a 75 aa cytoplasmic segment (2). The extracellular segment contains an Ig-like and a fibronectin-type III domain, plus a membrane proximal WSXWS motif. In their extracellular regions, mouse IL-6 Rα shares 89%, 51% and 50% aa identity with rat, human and porcine IL-6 Rα, respectively. Unlike gp130 that is expressed ubiquitously, the cellular distribution of IL-6 Rα is predominantly limited to hepatocytes and leukocyte subpopulations such as monocytes, neutrophils, T and B cells. Soluble IL-6Rα has been found in various body fluids (5). Two soluble receptor isoforms that arise either from proteolytic cleavage of the membrane-bound IL-6 Rα, or by alternative mRNA splicing (reported only in human) have been described (6, 7). Soluble IL-6 Rα binds IL-6 with an affinity similar to that of the membrane-bound IL-6 Rα. More importantly, the soluble IL-6 Rα/IL-6 complex is capable of interacting with the membrane-bound gp130 to activate cells that lack an integral membrane IL-6 Rα. It has been documented that elevated soluble IL-6 R is associated with numerous diseases including arthritic lesions, multiple myeloma and Crohn's disease (6, 7).

References:

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2. Sugita, T. *et al.* (1990) J. Exp. Med. **171**:2001.
3. Hibi, M. *et al.* (1990) Cell **63**:1149.
4. Saito, M. *et al.* (1992) J. Immunol. **148**:4066.
5. Novick, D. *et al.* (1989) J. Exp. Med. **170**:1409.
6. Jones, S.A. *et al.* (2001) FASEB J. **15**:43.
7. Jones, S.A. and S. Rose-John (2002) Biochim. Biophys. Acta **1592**:251.

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