

Product Information

Anti-Interleukin-3 Receptor α

Developed in Goat
Affinity Isolated Antibody

Product Number **I 2407**

Product Description

Anti-Human Interleukin-3 Receptor α (IL-3 R α) is developed in goat using a purified recombinant human interleukin-3 soluble receptor α (IL-3 sR α) expressed in insect *Sf* 21 cells as immunogen. Affinity isolated antigen specific antibody is obtained from goat anti-IL-3 R α antiserum by immuno-specific purification which removes essentially all goat serum proteins, including immunoglobulins, which do not specifically bind to the peptide.

Anti-Human Interleukin-3 Receptor α recognizes recombinant human IL-3 R α by immunoblotting and ELISA. The antibody shows approximately 2% cross-reactivity with recombinant human IL-2 sR β , recombinant human IL-2 sR γ , and recombinant human IL-6 sR.

Interleukin-3 (IL-3), originally called Colony Forming Unit-Stimulating Activity (CFU-SA),¹ is a multifunctional cytokine produced by activated T lymphocytes or mast cells.² IL-3 supports the formation of multilineage colonies in the early development of multipotent hematopoietic progenitor cells. It induces colony formation of macrophages, neutrophils, mast cells, and megakaryocytes from agar suspended bone marrow cells.³

Interleukin-3 binds specifically and with high affinity to cell-surface receptors. Interleukin-3 receptors are members of the cytokine receptor superfamily. The IL-3 receptor complex contains two distinct cytokine receptor subunits, ligand binding IL-3 R α and IL-3 R β . Recombinant human IL-3 sR α (286 amino acid residue) has a predicted molecular mass of approximately 33 kDa. The α subunit alone binds IL-3 with low affinity. The β subunit does not bind IL-3 by itself but is required for the high-affinity binding of IL-3 to the heterodimeric receptor complex.⁴ The β subunit is also a component of the high-affinity receptor complex for IL-5 and GM-CSF.⁵

Reagent

Anti-Human Interleukin-3 Receptor α is supplied as 100 μ g of antiserum lyophilized from a 0.2 μ m filtered solution of phosphate buffered saline (PBS).

Preparation Instructions

To one vial of lyophilized powder, add 1 ml of sterile phosphate buffered saline (PBS) to produce a 0.1 mg/ml stock solution of antibody.

Storage/Stability

Prior to reconstitution, store at -20°C . Reconstituted product may be stored at $2-8^{\circ}\text{C}$ for at least one month. For prolonged storage, freeze in working aliquots at -20°C . Avoid repeated freezing and thawing. Do not store in frost-free freezer.

Product Profile

For immunoblotting, a working antibody concentration of 0.1-0.2 μ g/ml is recommended. The detection limit for recombinant human IL-3 sR α is approximately 5 ng/lane and 2 ng/lane under non-reducing and reducing conditions, respectively.

For ELISAs, a working antibody concentration of 0.5-1.0 μ g/ml is recommended. The detection limit for human IL-3 R α is approximately 0.06 ng/well.

Note: In order to obtain the best results in various techniques and preparations, we recommend determining optimal working dilutions by titration.

Endotoxin level is < 10 ng/mg antibody as determined by the LAL (*Limulus* amoebocyte lysate) method.

References

1. Cerny, J., et al., Nature, **249**, 63-66 (1974).
2. Luger, T., et al., J. Immunol., **134**, 915-919 (1985).
3. Schrader, J., et al., Immunol. Rev., **76**, 79-104 (1983).
4. Le, F., et al., J. Biol. Chem., **275**, 5124-5130 (2000).
5. Evans, C.A., et al., Blood, **100**, 3164-3174 (2002).

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