

# Mouse IL-3 Neutralizing (D6C1) Rabbit mAb



✓ 100 µg

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**For Research Use Only. Not For Use In Diagnostic Procedures.**

## Species Cross-Reactivity: M

**Description:** Neutralizing antibodies can be used to inhibit normal biological function through their binding to biological molecules. These reagents can be used to determine the effects that a particular molecule has in biological systems. Mouse IL-3 Neutralizing (D6C1) Rabbit mAb has been shown to neutralize the proliferation of IL-3-dependent BaF3 cells *in vitro* with an  $ND_{50}$  in the range of 0.5-3.5 µg/ml.

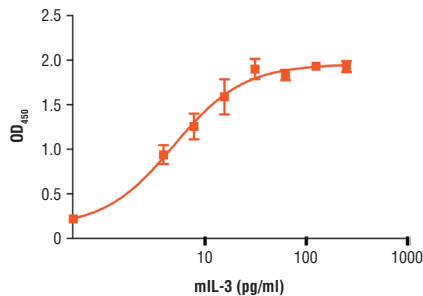
**Background:** IL-3 is produced by T cells, mast cells, and eosinophils (1). Target cells include hematopoietic progenitors, neutrophils, macrophages, mast cells, eosinophils, lymphoid, and erythroid cells (1). IL-3 supports growth and differentiation and is used as a media additive to support the culture of many cell types (1). The IL-3 receptor is a heterodimer of the IL-3-specific  $\alpha$ -chain and the common  $\beta$ -chain,  $\beta_c$ , which is also used by GM-CSF and IL-5. (1). Binding of IL-3 can also involve substitution of  $\beta_c$  by a  $\beta_{IL-3}$ -chain that appears to be specific for IL-3 (1,2). Binding of IL-3 to its cognate receptor(s) induces activation of Jak2 and the PI3K/Akt pathway, and phosphorylation of Stat1/3/5/6 (1). IL-3 may play an important role in the development of airway inflammation associated with asthma (3-5).

**Endotoxin:** Less than 0.1 EU/µg of antibody.

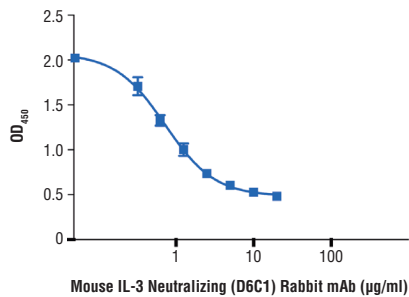
**Specificity/Sensitivity:** Mouse IL-3 Neutralizing (D6C1) Rabbit mAb binds to mouse IL-3 and neutralizes its effects in a BaF3 cell proliferation assay. This antibody does not cross-react with human IL-3, human IL-5, human GM-CSF, or mouse GM-CSF.

**Source/Purification:** Monoclonal antibody is produced by immunizing animals with a recombinant mouse IL-3 protein.

**Directions for Use:** CST recommends incubation of the neutralizing antibody with the intended target for 1 hr at 37°C before addition to the experiment at an optimal concentration determined by the user.



The proliferation of BaF3 cells treated with increasing amounts of mL-3 #8923 was determined. After a 72 hr treatment, cells were incubated with a tetrazolium salt and the  $OD_{450}$  was determined.



The ability of Mouse IL-3 Neutralizing (D6C1) Rabbit mAb to inhibit mL-3-induced BaF3 cell proliferation was assessed. Cells were incubated with increasing concentrations of antibody in the presence of mL-3 #8923 (250 pg/ml). After 72 hr, viable cells were detected by incubation with a tetrazolium salt and the  $OD_{450}$  was determined.

**Entrez-Gene ID** #3562  
**Swiss-Prot Acc.** #P08700

**Formulation:** Lyophilized from a 0.2 µm filtered solution in 10 mM HEPES with trehalose.

**Reconstitution:** Add sterile 10 mM HEPES pH 7.0 to a final concentration of greater than 50 µg/ml. Solubilize for 20 min at room temperature with occasional gentle vortexing.

**Storage:** Store Lyophilized material at -20°C. After reconstitution, recommended storage at 4°C for 1 month or -20°C for 6 months. Avoid repeated freeze/thawing.

## Background References:

- (1) Reddy, E.P. et al. (2000) *Oncogene* 19, 2532-47.
- (2) Hara, T. and Miyajima, A. (1992) *EMBO J* 11, 1875-84.
- (3) Asquith, K.L. et al. (2008) *J Immunol* 180, 1199-206.
- (4) Schroeder, J.T. et al. (2009) *J Immunol* 182, 2432-8.
- (5) Munitz, A. et al. (2006) *J Immunol* 177, 77-83.