SONY

Product Data Sheet

Biotin anti-mouse/rat CD126 (IL-6Rα chain)

Catalog # / Size: 1179015 / 50 µg

Clone: D7715A7

Isotype: Rat IgG2b, κ

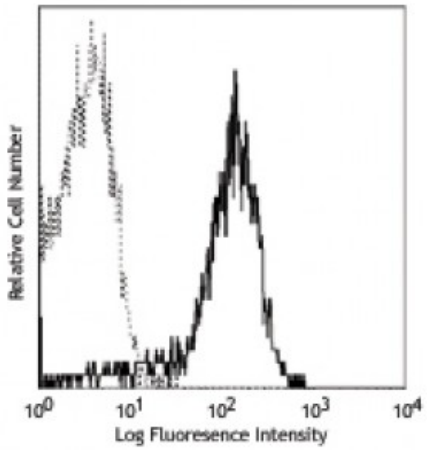
Immunogen: OKT4 hybridoma cells

Reactivity: Mouse,Rat

Preparation: The antibody was purified by affinity chromatography, and conjugated with biotin under optimal conditions. The solution is free of unconjugated biotin.

Formulation: Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide.

Concentration: 0.5



F0 mouse myeloma cell line stained with D7715A7 PE

Applications:

Applications: Flow Cytometry

Recommended Usage: Each lot of this antibody is quality control tested by immunofluorescent staining with flow cytometric analysis. For flow cytometric staining, the suggested use of this reagent is ≤1.0 microg per million cells in 100 microL volume. It is recommended that the reagent be titrated for optimal performance for each application.

Application Notes: Additional reported applications (for the relevant formats) include: immunoprecipitation[1,2,5], *in vivo* receptor blocking[1-2,4-6,8], and *in vitro* neutralization[7]. For most successful immunofluorescent staining results, it may be important to maximize signal over background by using a relatively bright fluorochrome-antibody conjugate (Cat. No. 115806) or by using a high sensitivity, three-layer staining technique (e.g., including a biotinylated antibody (Cat. No. 115804) or biotinylated anti-rat IgG second step (Cat. No. 405402), followed by SAv-PE (Cat. No. 405204)). The LEAF™ purified antibody (Endotoxin <0.1 EU/µg, Azide-Free, 0.2 µm filtered) is recommended for functional assays (Cat. No. 115808).

Application References:

1. Coulie PG, *et al.* 1990. *Curr. Top. Microbiol. Immunol.* 166:43. (Block, IP)
2. Vink A, *et al.* 1990. *J. Exp. Med.* 172:997. (Block, IP)
3. Sun R, *et al.* 2004. *J. Immunol.* 172:5648. (FC)
4. McKinney WJ, *et al.* 1998. *Am. J. Respir. Cell Mol. Biol.* 18:696. (Block)
5. Weigert C, *et al.* 2006. *J. Biol. Chem.* 281:7060. (Block, IP)
6. Koizumi N, *et al.* 2007. *J. Immunol.* 178:1767. (Block)
7. Walker F, *et al.* 2008. *Blood* 111:3978. (Neut) PubMed
8. Yadav M, *et al.* 2008. *J. Immunol.* 180:2772. (Block) PubMed
9. Sintes J, *et al.* 2010. *J. Leukoc. Biol.* 88:687. PubMed

Description: CD126 is an 80 kD IL-6 receptor α chain also known as IL-6R. It is a member of the immunoglobulin superfamily that is expressed on activated T and B cells, monocytes, hepatocytes, and plasma cells. High affinity IL-6 receptors are formed by the non-covalent association of CD126 and the IL-6 receptor β chain (CD130 or gp130). CD126 binds IL-6 with low affinity, but does not signal. The β chain (gp130, CD130) does not bind IL-6 by itself, but associates with the α-chain/IL-6

complex to initiate signal transduction. IL-6 binding to the receptor complex results in the stimulation of B and T cells, and hematopoietic precursor proliferation and differentiation. The D7715A7 (15A7) antibody blocks IL-6/IL-6 receptor interactions.

Antigen References:

1. Taga T, *et al.* 1997. *Annu. Rev. Immunol.* 15:797.
2. Fitzgerald K, *et al.* 2001. The Cytokine FactsBook. Academic Press London.
3. Boulanger MJ, *et al.* 2003. *Science* 300:2101.