Revision 8

#10680 Store at +4C

FoxP3 (3G3) Mouse mAb (PE-Cy7® Conjugate)

Cell Signaling TECHNOLOGY®

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Applications:	Reactivity:	Sensitivity:	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
FC-FP	M	Endogenous	Mouse IgG1 kappa	#Q9BZS1	50943

Product Usage Information

For optimal flow cytometry results, we recommend 0.125µg of antibody per test.

Application	Dilution
Flow Cytometry (Fixed/Permeabilized)	1:160

Storage

Supplied in 10 mM NaH2PO4, 150 mM NaCl, 0.05% BSA, 0.05% NaN3, pH7.2. This product is stable for 6 months when stored at 4ºC. Do not aliquot the antibody. Protect from light. Do not freeze.

Specificity/Sensitivity

FoxP3 (3G3) Mouse mAb (PE-Cy7® Conjugate) recognizes endogenous levels of total FoxP3 protein. This antibody detects an epitope within the intracellular domain.

Source / Purification

This monoclonal antibody was purified from tissue culture supernatant via affinity chromatography. The purified antibody was conjugated under optimal conditions, with unreacted dye removed from the preparation.

Description

This Cell Signaling Technology antibody is conjugated to PE-Cy7® and tested in-house for direct flow cytometric analysis in mouse cells.

Background

Forkhead box (Fox) proteins are a family of evolutionarily conserved transcription factors containing a sequence known as Forkhead box or winged helix DNA binding domain (1). The human genome contains 43 Fox proteins that are divided into subfamilies. The FoxP subfamily has four members, FoxP1 - FoxP4, which are broadly expressed and play important roles in organ development, immune response, and cancer pathogenesis (2-4). The FoxP subfamily has several characteristics that are atypical among Fox proteins: their Forkhead domain is located at the carboxy-terminal region and they contain motifs that promote homo- and heterodimerization. FoxP proteins usually function as transcriptional repressors (4,5).

FoxP3 is crucial for the development of T cells with regulatory properties (Treg) (6). Mutations in FoxP3 are associated with immune dysregulation, polyendocrinopathy, enteropathy, and X-linked syndrome (IPEX) (7), while overexpression in mice causes severe immunodeficiency (8). Research studies have shown that FoxP3 functions as a tumor suppressor in several types of cancer (9-11).

Background References

1. Myatt, S.S. and Lam, E.W. (2007) *Nat Rev Cancer* 7, 847-59.
2. Shu, W. et al. (2001) *J Biol Chem* 276, 27488-97.
3. Lu, M.M. et al. (2002) *Gene Expr Patterns* 2, 223-8.
4. Koon, H.B. et al. (2007) *Expert Opin Ther Targets* 11, 955-65.
5. Li, S. et al. (2004) *Mol Cell Biol* 24, 809-22.
6. Ochs, H.D. et al. (2007) *Immunol Res* 38, 112-21.
7. Bennett, C.L. et al. (2001) *Nat Genet* 27, 20-1.
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9. Zuo, T. et al. (2007) *Cell* 129, 1275-86.
10. Zuo, T. et al. (2007) *J Clin Invest* 117, 3765-73.
11. Wang, L. et al. (2009) *Cancer Cell* 16, 336-46.

Species Reactivity

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

Applications Key

FC-FP: Flow Cytometry (Fixed/Permeabilized)

Cross-Reactivity Key

M: Mouse

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