

#5298 Store at -20C

FoxP3 (D25D4) Rabbit mAb



Orders: 877-616-CELL (2355)
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Web: info@cellsignal.com
cellsignal.com

3 Trask Lane | Danvers | Massachusetts | 01923 | USA

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Applications: WB	Reactivity: H	Sensitivity: Endogenous	MW (kDa): 45	Source/Isotype: Rabbit IgG	UniProt ID: #Q9BZS1	Entrez-Gene Id: 50943
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Product Usage Information

Application

Western Blotting

Dilution

1:1000

Storage

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at -20°C. Do not aliquot the antibody.

Specificity / Sensitivity

FoxP3 (D25D4) Rabbit mAb detects endogenous levels of total FoxP3 protein.

Source / Purification

Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Trp295 of human FoxP3 protein.

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.
8. Kaspruwicz, D.J. et al. (2003) *J Immunol* 171, 1216-23.
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).

Western Blot Buffer

IMPORTANT: For western blots, incubate membrane with diluted primary antibody in 5% w/v BSA, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.

Applications Key

WB: Western Blotting

Cross-Reactivity Key

H: human **M:** mouse **R:** rat **Hm:** hamster **Mk:** monkey **Vir:** virus **Mi:** mink **C:** chicken **Dm:** D. melanogaster
X: Xenopus **Z:** zebrafish **B:** bovine **Dg:** dog **Pg:** pig **Sc:** S. cerevisiae **Ce:** C. elegans **Hr:** horse
GP: Guinea Pig **Rab:** rabbit **All:** all species expected

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