Background: Forkhead (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-terminus 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, 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).

Specificity/Sensitivity: FoxP3 (D6O8R) Rabbit mAb recognizes endogenous mouse FoxP3 protein and is also reactive with human FoxP3; however, this antibody is not suggested for immunohistochemical analysis of human tissues. Instead, FoxP3 (D2W8E™) Rabbit mAb (IHC Specific) #98377 is recommended for IHC analysis of human tissue samples.

Source/Purification: Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Pro44 of mouse FoxP3 protein.

Recommended Antibody Dilutions:

- Immunohistochemistry (Paraffin): 1:100
- Optimal IHC dilutions determined using SignalStain® Boost IHC Detection Reagent.
- Unmasking buffer: SignalStain® Citrate Unmasking Solution (10X) #14746
- Antibody diluent: SignalStain® Antibody Diluent #8112
- Detection reagent: SignalStain® Boost (HRP, Rabbit) #8114
- Immunohistochemistry (Leica® Bond™): 1:400
- Immunofluorescence (IF-F): 1:100
- Flow Cytometry: 1:50

For product specific protocols and a complete listing of recommended companion products please see the product web page at www.cellsignal.com.

Background References:


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Immunohistochemical analysis of paraffin-embedded mouse spleen using FoxP3 (D6O8R) Rabbit mAb.

Immunohistochemical analysis of paraffin-embedded mouse small intestine using FoxP3 (D6O8R) Rabbit mAb.

Immunohistochemical analysis of paraffin-embedded mouse lung using FoxP3 (D6O8R) Rabbit mAb.

Immunohistochemical analysis of paraffin-embedded 4T1 metastatic tumor in mouse lung using FoxP3 (D6O8R) Rabbit mAb performed on the Leica® Bond™ Rx.

Flow cytometric analysis of mouse splenocytes using FoxP3 (D6O8R) Rabbit mAb (right) and co-stained with CD4 (RM4-5) Rat mAb (APC Conjugate) #82116, compared to a concentration-matched Rabbit (DA1E) mAb IgG XP® Isotype Control #3900 (left). Anti-rabbit IgG (H+L), F(ab')2 Fragment (Alexa Fluor® 488 Conjugate) was used as a secondary antibody.

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