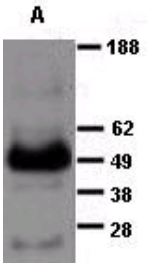
full spectrum cell analysis®
eBioscience®

Anti-Human Foxp3 Purified

Catalog Number: 14-5779
Also Known As:Forkhead Box P3, Scurfin, JM2, Treg
RUO: For Research Use Only



Immunoblotting of normal human peripheral blood cell lysate probed with 1 µg/mL of Anti-Human Foxp3 Purified and revealed with Anti-Mouse IgG HRP. FoxP3 is detected at ~50 kDa.

Product Information

Contents: Anti-Human Foxp3 Purified
REF Catalog Number: 14-5779
Clone: hFOXY
Concentration: 0.5 mg/ml
Host/Isotype: Mouse IgG1, κ

Formulation: aqueous buffer, 0.09% sodium azide, may contain carrier protein/stabilizer
Temperature Limitation: Store at 2-8°C.
LOT Batch Code: Refer to Vial
Use By: Refer to Vial
Caution, contains Azide

Description

eBioscience offers a panel of monoclonal antibodies to different epitopes of human Foxp3, providing useful tools for investigating the complete expression pattern of Foxp3 at the protein level, and discerning the precise subsets of $Foxp3^+$ cells. Intracellular staining with these antibodies has demonstrated different patterns of Foxp3 expression in human PBMCs, depending on the monoclonal antibody used. These differences could be due to the expression of variants which are differentially spliced or modified post-translationally. Furthermore different intracellular staining protocols are required for each antibody, and may also contribute to the variations in observed staining patterns. Please review the flow cytometric data presented on each relevant datasheet to ensure ordering the appropriate antibody for your own uses. Please contact tech@ebioscience.com or 888.999.1371 for any additional assistance.

Please see the following link for FAQ regarding the usage of eBioscience Foxp3 reagents:
http://www.ebioscience.com/ebioscience/Foxp3FAQs.htm

Important: This antibody is not compatible with intracellular staining protocols which include DNase Treatment. Please use the specific buffers and protocol recommended for optimal results. (Human FoxP3 staining buffers cat. 88-5778)

The hFOXY antibody was generated against recombinant human FoxP3 protein (excluding the forkhead domain) and binds to an internal portion of human FoxP3 transcription factor, also known as FORKHEAD BOX P3, SCURFIN, and JM2. hFOXY does not crossreact with other FoxP-related family members tested including FoxP1, FoxP2, and FoxP4. Crossreactivity of hFOXY to other proteins has not been determined. The FoxP3 gene was identified as the gene defective in 'scurfy' (sf) mice.

Constitutive expression of FoxP3 mRNA was initially reported in CD4+/CD25+ regulatory T cells (Treg cells) suggesting that it may be a regulatory gene for these cells. However, recent reports demonstrate expression of FoxP3 in a subpopulation of rat and human CD8+ cells, activated conventional T cells and CD4+/CD25- cells, indicating that FoxP3 expression may not be exclusively limited to CD4+/CD25+ Treg cells. Furthermore, the majority of FoxP3 expression analysis so far has been limited to mRNA, which does not necessarily predict the levels of protein expression. At least one splice variant (lacking amino acids 71-105) of FoxP3 is reported in human T cells. This variant is expressed in CD8+ T cells from some donors, while both forms are present in the CD4+/CD25+ population. This may have prevented the detection of all FoxP3 expressing cells by conventional mRNA analysis such as RT-PCR and real-time PCR.

Intracellular staining of human PBMC with hFOXY reveals a subset of approximately 20% of total PBMC reacting with the hFOXY antibody however, this is subject to donor variability. Multi-color flow cytometric analysis has shown this subset to be within the CD4+ and CD8+ populations and that approximately 13-15% of CD4+/CD25+ cells stain with hFOXY. Intracellular staining of hFOXY with a polyclonal antibody, generated against a different region of human FoxP3, demonstrates 100% correlation, confirming reactivity of hFOXY to human FoxP3.

Applications Reported

This hFOXY antibody has been reported for use in intracellular staining followed by flow cytometric analysis, immunoblotting (WB), and immunohistochemical staining. (Fluorochrome conjugated hFOXY is recommended for use in intracellular flow cytometry.)

Applications Tested

This hFOXY antibody has been tested by immunoblotting (WB) (1-3ug/ml) of human PBMC lysate (sonicated in sample loading buffer).

References

Sakaguchi S. 2003. The origin of FOXP3-expressing CD4+ regulatory T cells: thymus or periphery. J Clin Invest. 112(9):1310-2.
Hori S, Nomura T, Sakaguchi S. 2003. Control of regulatory T cell development by the transcription factor Foxp3. Science. 299(5609):1057-61.
Takahata Y, Nomura A, Takada H, Ohga S, Furuno K, Hikino S, Nakayama H, Sakaguchi S, Hara T. 2004. CD25+CD4+ T cells in human cord blood: an immunoregulatory subset with naive phenotype and specific expression of forkhead box p3 (Foxp3) gene. Exp Hematol. 32(7):622-9.
Xystrakis E, Dejean AS, Bernard I, Druet P, Liblau R, Gonzalez-Dunia D, Saoudi A. 2004. Identification of a novel natural regulatory CD8 T-cell subset and analysis of its mechanism of regulation. Blood. 104(10):3294-301.
Manavalan JS, Kim-Schulze S, Scotto L, Naiyer AJ, Vlad G, Colombo PC, Marboe C, Mancini D, Cortesini R, Suciu-Foca N.2004. Alloantigen specific CD8+CD28- FOXP3+ T suppressor cells induce ILT3+ ILT4+ tolerogenic endothelial cells, inhibiting alloreactivity. Int Immunol. 16(8):1055-68.

Related Products

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