10320 Camino Santa Fe, Suite G
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Goat Anti-FOXP3 / SCURFIN Antibody
Peptide-affinity purified goat antibody
Catalog # AF1438a

Specification

Goat Anti-FOXP3 / SCURFIN Antibody - Product Information

Application	**ICC, IHC, WB, IF, FC**
Primary Accession	Q9BZS1
Other Accession	NP_001107849, 50943
Reactivity	**Human**
Predicted	**Pig, Dog**
Host	**Goat**
Clonality	**Polyclonal**
Concentration	**100ug/200ul**
Isotype	**IgG**
Calculated MW	**47244**

Goat Anti-FOXP3 / SCURFIN Antibody - Additional Information

Gene ID 50943

Other Names
Forkhead box protein P3, Scurfin, FOXP3, IPEX

Format
0.5 mg IgG/ml in Tris saline (20mM Tris pH7.3, 150mM NaCl), 0.02% sodium azide, with 0.5% bovine serum albumin

Storage
Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions
Goat Anti-FOXP3 / SCURFIN Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Goat Anti-FOXP3 / SCURFIN Antibody - Protein Information

Name FOXP3

Synonyms IPEX

Function
Transcriptional regulator which is crucial for the development and inhibitory function of regulatory T-cells (Treg) (PubMed:17377532, PubMed:21458306, PubMed:<a href="http://www.uniprot.org/citations/23947341"

target="_blank">23947341, PubMed:24354325, PubMed:24722479, PubMed:24835996, PubMed:30513302, PubMed:32644293). Plays an essential role in maintaining homeostasis of the immune system by allowing the acquisition of full suppressive function and stability of the Treg lineage, and by directly modulating the expansion and function of conventional T-cells (PubMed:23169781). Can act either as a transcriptional repressor or a transcriptional activator depending on its interactions with other transcription factors, histone acetylases and deacetylases (PubMed:17377532, PubMed:21458306, PubMed:23947341, PubMed:24354325, PubMed:24722479). The suppressive activity of Treg involves the coordinate activation of many genes, including CTLA4 and TNFRSF18 by FOXP3 along with repression of genes encoding cytokines such as interleukin-2 (IL2) and interferon-gamma (IFNG) (PubMed:17377532, PubMed:21458306, PubMed:23947341, PubMed:24354325, PubMed:24722479). Inhibits cytokine production and T-cell effector function by repressing the activity of two key transcription factors, RELA and NFATC2 (PubMed:15790681). Mediates transcriptional repression of IL2 via its association with histone acetylase KAT5 and histone deacetylase HDAC7 (PubMed:17360565). Can activate the expression of TNFRSF18, IL2RA and CTLA4 and repress the expression of IL2 and IFNG via its association with transcription factor RUNX1 (PubMed:17377532). Inhibits the differentiation of IL17 producing helper T-cells (Th17) by antagonizing RORC function, leading to down-regulation of IL17 expression, favoring Treg development (PubMed:18368049). Inhibits the transcriptional activator activity of RORA (PubMed:18354202). Can repress the expression of IL2 and IFNG via its association with transcription factor IKZF4 (By similarity).

Cellular Location
Nucleus {ECO:0000255|PROSITE-ProRule:PRU00089, ECO:0000269|PubMed:17360565, ECO:0000269|PubMed:18354202, ECO:0000269|PubMed:22678915, ECO:0000269|PubMed:23396208, ECO:0000269|PubMed:23973222, ECO:0000269|PubMed:23973223, ECO:0000269|PubMed:32644293}. Cytoplasm
Note=Predominantly expressed in the cytoplasm in activated conventional T-cells whereas predominantly expressed in the nucleus in regulatory T- cells (Treg). The 41 kDa form derived by proteolytic processing is found exclusively in the chromatin fraction of activated Treg cells (By similarity). {ECO:0000250|UniProtKB:Q99JB6, ECO:0000269|PubMed:22678915}

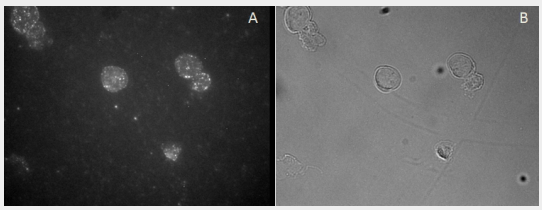
Goat Anti-FOXP3 / SCURFIN Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

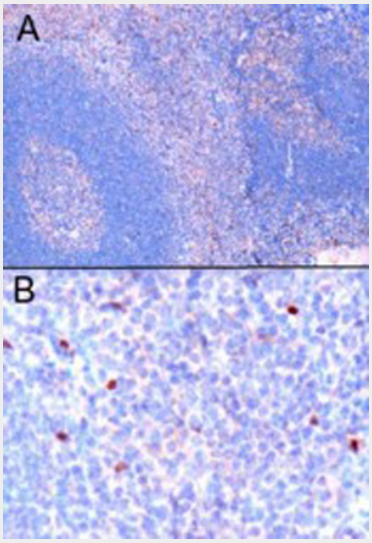
- Western Blot
- Blocking Peptides
- Dot Blot

- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

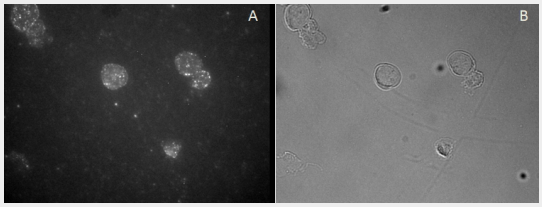
Goat Anti-FOXP3 / SCURFIN Antibody - Images



AF1438a staining of CD25-sorted (Treg) human blood cells gathered by cytospin and detected by FITC (A) and in phase contrast (B).



AF1438a (1 µg/ml) staining of paraffin embedded Human Tonsil. Microwaved antigen retrieval with Tris/EDTA buffer pH9, HRP-staining. A) Nuclear staining of scattered cells in the interfollicular area. B) High magnification of positive cells.



EB05294 staining of CD25-sorted (Treg) Human blood cells gathered by cytospin and detected by FITC (A) and in phase contrast (B).

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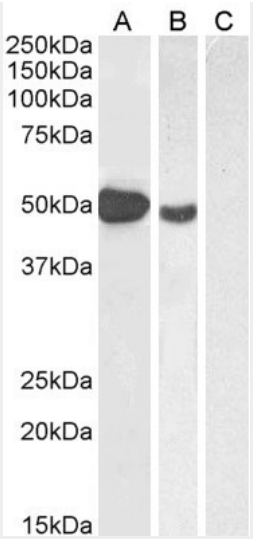
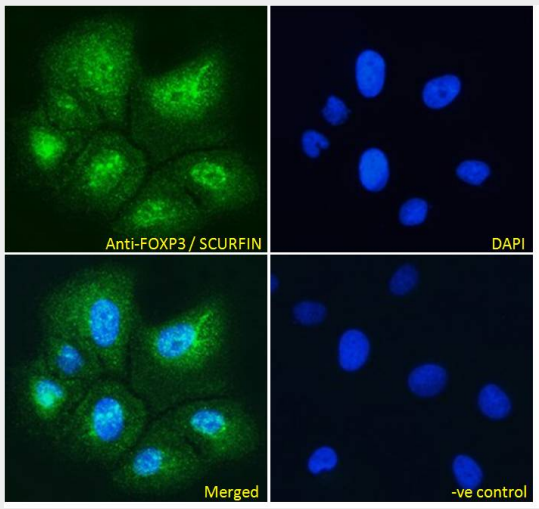


EB05294 (1µg/ml) staining of Human Muscle (A), (2ug/ml) MOLT4 (B) and (1µg/ml) negative control Pancreas (C) lysate (35µg protein in RIPA buffer). Detected by chemiluminescence.



EB05294 Immunofluorescence analysis of paraformaldehyde fixed U2OS cells, permeabilized with 0.15% Triton. Primary incubation 1hr (10ug/ml) followed by Alexa Fluor 488 secondary antibody (4ug/ml), showing strong localization to nucleoplasm. The nuclear stain is DAPI (blue). Negative control: Unimmunized goat IgG (10ug/ml) followed by Alexa Fluor 488 secondary antibody (4ug/ml).

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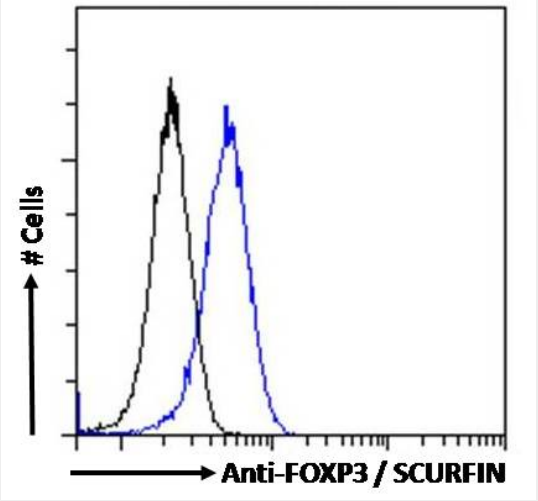
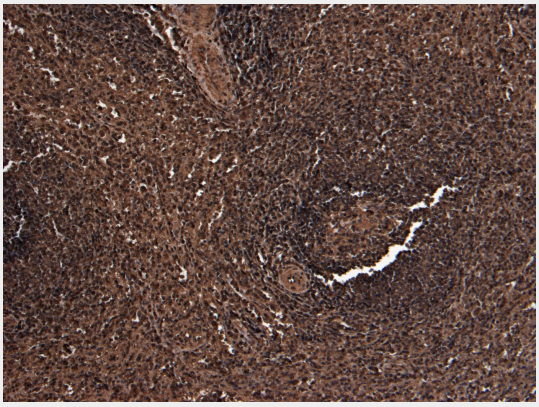
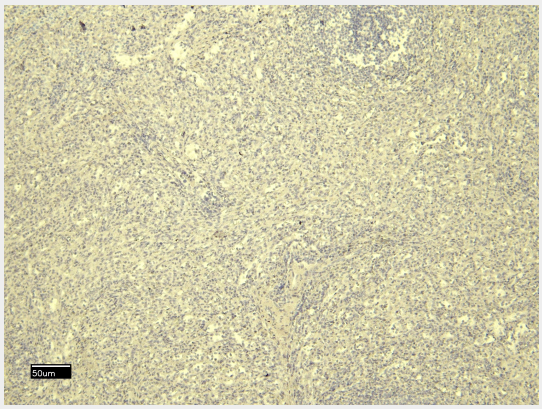


EB05294 Flow cytometric analysis of paraformaldehyde fixed Jurkat cells (blue line), permeabilized with 0.5% Triton. Primary incubation 1hr (10ug/ml) followed by Alexa Fluor 488 secondary antibody (4ug/ml). IgG control: Unimmunized goat IgG (black line) followed by Alexa Fluor 488 secondary antibody.



EB05294 (8µg/ml) staining of paraffin embedded Human Spleen. Heat induced antigen retrieval with citrate buffer Ph 6, HRP-staining.



EB05294 Negative Control showing staining of paraffin embedded Human Spleen, with no primary antibody.

Goat Anti-FOXP3 / SCURFIN Antibody - Background

The protein encoded by this gene is a member of the forkhead/winged-helix family of transcriptional regulators. Defects in this gene are the cause of immunodeficiency

polyendocrinopathy, enteropathy, X-linked syndrome (IPEX), also known as X-linked autoimmunity-immunodeficiency syndrome. Alternatively spliced transcript variants encoding different isoforms have been identified.

Goat Anti-FOXP3 / SCURFIN Antibody - References

Impact of CD4+CD25high regulatory T-cells and FoxP3 expression in the peripheral blood of patients with systemic lupus erythematosus. Atfy M, et al. Egypt J Immunol, 2009. PMID 20726328.
Clinical significance of intratumoral CD8+ regulatory T cells in prostate carcinoma. Comp□rat E, et al. Anal Quant Cytol Histol, 2010 Feb. PMID 20701086.
[Association of transcription factor FOXP3 gene polymorphism with genetic susceptibility to systematic lupus erythematosus in Guangxi Zhuang population.] Lan Y, et al. Zhonghua Yi Xue Yi Chuan Xue Za Zhi, 2010 Aug. PMID 20677152.
Activation of the aryl hydrocarbon receptor induces human type 1 regulatory T cell-like and Foxp3(+) regulatory T cells. Gandhi R, et al. Nat Immunol, 2010 Sep. PMID 20676092.
[Correlation between FOXP3 gene polymorphisms and allergic rhinitis.] Zhang Y, et al. Zhonghua Er Bi Yan Hou Tou Jing Wai Ke Za Zhi, 2010 May. PMID 20654176.