

FOXP3 Antibody
Purified Mouse Monoclonal Antibody
Catalog # AO2172a

Specification

FOXP3 Antibody - Product Information

Application	E, WB, FC, IHC
Primary Accession	O9BZS1
Reactivity	Human
Host	Mouse
Clonality	Monoclonal
Isotype	IgG1
Calculated MW	47.3kDa KDa

Description

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.

Immunogen

Purified recombinant fragment of human FOXP3 (AA: 297-431) expressed in E. Coli.

Formulation

Purified antibody in PBS with 0.05% sodium azide

FOXP3 Antibody - Additional Information

Gene ID 50943

Other Names

Forkhead box protein P3, Scurfin, FOXP3, IPEX

Dilution

E~~1/10000
WB~~1/500 - 1/2000
FC~~1/200 - 1/400
IHC~~1/200 - 1/1000

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

FOXP3 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

FOXP3 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](http://www.uniprot.org/citations/17377532) target="_blank">17377532, PubMed: [21458306](http://www.uniprot.org/citations/21458306) target="_blank">21458306, PubMed: [23947341](http://www.uniprot.org/citations/23947341) target="_blank">23947341, PubMed: [24354325](http://www.uniprot.org/citations/24354325) target="_blank">24354325, PubMed: [24722479](http://www.uniprot.org/citations/24722479) target="_blank">24722479, PubMed: [24835996](http://www.uniprot.org/citations/24835996) target="_blank">24835996, PubMed: [30513302](http://www.uniprot.org/citations/30513302) target="_blank">30513302, PubMed: [32644293](http://www.uniprot.org/citations/32644293) target="_blank">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](http://www.uniprot.org/citations/23169781) target="_blank">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](http://www.uniprot.org/citations/17377532) target="_blank">17377532, PubMed: [21458306](http://www.uniprot.org/citations/21458306) target="_blank">21458306, PubMed: [23947341](http://www.uniprot.org/citations/23947341) target="_blank">23947341, PubMed: [24354325](http://www.uniprot.org/citations/24354325) target="_blank">24354325, PubMed: [24722479](http://www.uniprot.org/citations/24722479) target="_blank">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](http://www.uniprot.org/citations/17377532) target="_blank">17377532, PubMed: [21458306](http://www.uniprot.org/citations/21458306) target="_blank">21458306, PubMed: [23947341](http://www.uniprot.org/citations/23947341) target="_blank">23947341, PubMed: [24354325](http://www.uniprot.org/citations/24354325) target="_blank">24354325, PubMed: [24722479](http://www.uniprot.org/citations/24722479) target="_blank">24722479). Inhibits cytokine production and T-cell effector function by repressing the activity of two key transcription factors, RELA and NFATC2 (PubMed: [15790681](http://www.uniprot.org/citations/15790681) target="_blank">15790681). Mediates transcriptional repression of IL2 via its association with histone acetylase KAT5 and histone deacetylase HDAC7 (PubMed: [17360565](http://www.uniprot.org/citations/17360565) target="_blank">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](http://www.uniprot.org/citations/17377532) target="_blank">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](http://www.uniprot.org/citations/18368049) target="_blank">18368049). Inhibits the transcriptional activator activity of RORA (PubMed: [18354202](http://www.uniprot.org/citations/18354202) target="_blank">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}

FOXP3 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 Cytometry](#)
- [Cell Culture](#)