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Anti-FOXP3 Antibody

Catalog # ABO12717

Product Information

Application	IHC-P
Primary Accession	Q9BZS1
Host	Rabbit
Reactivity	Human, Mouse, Rat
Clonality	Polyclonal
Format	Lyophilized
Description	Rabbit IgG polyclonal antibody for Forkhead box protein P3(FOXP3) detection. Tested with IHC-P in Human;Mouse;Rat.
Reconstitution	Add 0.2ml of distilled water will yield a concentration of 500ug/ml.

Additional Information

Gene ID	50943
Other Names	Forkhead box protein P3, Scurfin, Forkhead box protein P3, C-terminally processed, Forkhead box protein P3 41 kDa form, FOXP3, IPEX
Calculated MW	47244
Application Details	Immunohistochemistry(Paraffin-embedded Section), 0.5-1 □g/ml, Human, Mouse, Rat, By Heat
Subcellular Localization	Nucleus . Cytoplasm . 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). .
Source	Eukaryota
Protein Name	Forkhead box protein P3
Contents	Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na2HPO4, 0.05mg NaN3.
Immunogen	E.coli-derived human FOXP3 recombinant protein (Position: H101-P431). Human FOXP3 shares 88% amino acid (aa) sequence identity with mouse FOXP3.
Purification	Immunogen affinity purified.
Cross Reactivity	No cross reactivity with other proteins

Storage	At -20˚C for one year. After r˚Constitution, at 4˚C for one month. It˚Can also be aliquotted and stored frozen at -20˚C for a longer time.Avoid repeated freezing and thawing.
Sequence Similarities	Contains 1 C2H2-type zinc finger.

Protein Information

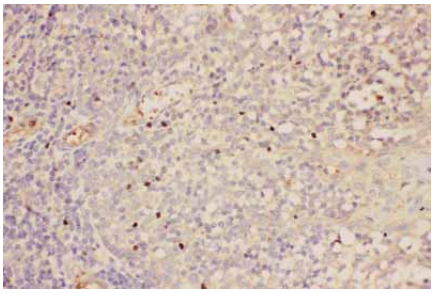
Name	FOXP3
Synonyms	IPEX
Function	Transcriptional regulator which is crucial for the development and inhibitory function of regulatory T-cells (Treg) (PubMed:17377532, PubMed:21458306, PubMed:23947341, PubMed:24354325, PubMed:24722479, PubMed:24835996, PubMed:30513302, PubMed:32644293). Plays an essential 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}

Background

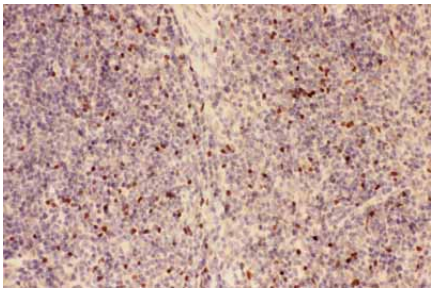
FOXP3(forkhead box P3) is a protein involved in immune system responses. The human FOXP3 genes contain 11 coding exons. Exon-intron boundaries are identical across the coding regions of the mouse and human genes. By genomic sequence analysis, the FOXP3 gene maps to the p arm of the X chromosome(specifically, Xp11.23). A member of the FOX protein family, FOXP3 appears to function as a

master regulator in the development and function of regulatory T cells. While the precise control mechanism has not yet been established, FOX proteins belong to the forkhead/winged-helix family of transcriptional regulators and are presumed to exert control via similar DNA binding interactions during transcription.

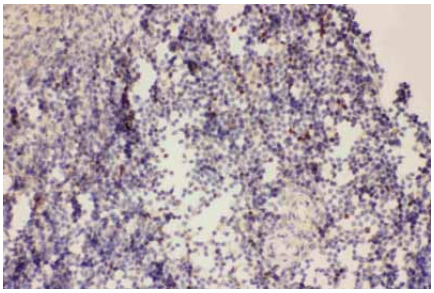
Images



Anti-FOXP3 Picoband antibody, ABO12717-1.JPGIHC(P): Human Tonsil Tissue



Anti-FOXP3 Picoband antibody, ABO12717-2.JPGIHC(P): Mouse Spleen Tissue



Anti-FOXP3 Picoband antibody, ABO12717-3.JPGIHC(P):Rat Spleen Tissue

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.