



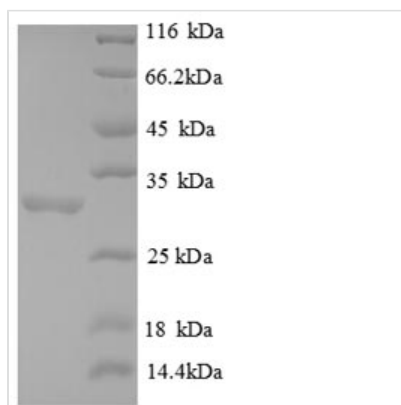
Recombinant Human Forkhead box protein P3 (FOXP3), partial

Product Code	CSB-EP861191HU1
Relevance	Transcriptional regulator which is crucial for the development and inhibitory function of regulatory T-cells (Treg). Plays an essential role in maintaining homeostasis of the immune syst 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. Can act either as a transcriptional repressor or a transcriptional activator depending on its interactions with other transcription factors, histone acetylases and deacetylases. 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). Inhibits cytokine production and T-cell effector function by repressing the activity of two key transcription factors, RELA and NFATC2 . Mediates transcriptional repression of IL2 via its association with histone acetylase KAT5 and histone deacetylase HDAC7 . Can activate the expression of TNFRSF18, IL2RA and CTLA4 and repress the expression of IL2 and IFNG via its association with transcription factor RUNX1 . Inhibits the differentiation of IL17 producing helper T-cells (Th17) by antagonizing RORC function, leading to down-regulation of IL17 expression, favoring Treg development . Inhibits the transcriptional activator activity of RORA . Can repress the expression of IL2 and IFNG via its association with transcription factor IKZF4 .
Abbreviation	Recombinant Human FOXP3 protein, partial
Storage	The shelf life is related to many factors, storage state, buffer ingredients, storage temperature and the stability of the protein itself. Generally, the shelf life of liquid form is 6 months at -20°C/-80°C. The shelf life of lyophilized form is 12 months at -20°C/-80°C.
Uniprot No.	Q9BZS1
Alias	Scurfin
Product Type	Recombinant Protein
Immunogen Species	Homo sapiens (Human)
Purity	Greater than 90% as determined by SDS-PAGE.
Sequence	MPNPRPGKPSAPSLALGPSPGASPSWRAAPKASDLLGARGPGGTFQGRDLR GGAHASSSSSLNPMPPSQLQLPTLPLVMVAPSGARLGPLPHLQALLQDRPHFM HQLSTVDAHARTPVLQVHPLESPAMISLTPPTTATGVFSLKARPGLPPGINVAS LEWVSREPALLCTFPNPSAPRKDSTLSAVPQSSYPLLANGVCKWPGCEKVFE EPEDFLKHCQADHLLDEKGRAQCLLQREMVQSLEQQLVLEKEKLSAMQAHL
Research Area	Transcription
Source	E.coli



Target Names	FOXP3
Expression Region	1-260aa
Notes	Repeated freezing and thawing is not recommended. Store working aliquots at 4°C for up to one week.
Tag Info	N-terminal 6xHis-tagged
Mol. Weight	31.7kDa
Protein Length	Partial

Image



(Tris-Glycine gel) Discontinuous SDS-PAGE (reduced) with 5% enrichment gel and 15% separation gel.

Description

The production of this Recombinant Human FOXP3 protein required the insertion of a DNA fragment (FOXP3, 1-260aa) into an expression vector and the transferral of this vector into E.coli cells (the step of transformation). The cells were then cultured and induced to express the FOXP3 protein. This recombinant protein was fused with N-terminal 6xHis tag. Its purity is 90%+ determined by SDS-PAGE.

FOXP3 (also called IPEX) is a gene encoding a protein called forkhead box protein P3 (FOXP3) (also known as scurfin) in human. The protein encoded by this gene can be cleaved into two chains, including forkhead box protein P3, C-terminally processed and forkhead box protein P3 41 kDa form. The FOXP3 protein can bind to specific regions of DNA and function as a master regulator of the regulatory pathway in regulating the immune system response. The FOXP3 protein is found primarily in the thymus (an immune system gland), where these regulatory T cells are produced.

Shelf Life

The shelf life is related to many factors, storage state, buffer ingredients, storage temperature and the stability of the protein itself. Generally, the shelf life of liquid form is 6 months at -20°C/-80°C. The shelf life of lyophilized form is 12 months at -20°C/-80°C.