Data Sheet (Cat.No.TMPH-01352)

TargetMol

FOXP3 Protein, Human, Recombinant (His)

General Information

Synonyms:	FOXP3;Scurfin;IPEX;Forkhead box protein P3
Protein Construction:	1-260 aa
Species:	Human
Expression Host:	E. coli
Accession:	Q9BZS1
Molecular Weight:	31.7 kDa (predicted)
AA Sequence:	MPNPRPGKPSAPSLALGPSPGASPSWRAAPKASDLLGARGPGGTFQGRDLRGGAHASSSSLNPMPPSQLQ LPTLPLVMVAPSGARLGPLPHLQALLQDRPHFMHQLSTVDAHARTPVLQVHPLESPAMISLTPPTTATGVFSL KARPGLPPGINVASLEWVSREPALLCTFPNPSAPRKDSTLSAVPQSSYPLLANGVCKWPGCEKVFEEPEDFLK HCQADHLLDEKGRAQCLLQREMVQSLEQQLVLEKEKLSAMQAHL

QC Testing

Biological Activity:	Activity has not been tested. It is theoretically active, but we cannot guarantee it. If you require protein activity, we recommend choosing the eukaryotic expression version first.
Purity:	> 90% as determined by SDS-PAGE.
Endotoxin:	< 1.0 EU/μg of the protein as determined by the LAL method.
Formulation:	Tris-based buffer, 50% glycerol

Preparation and Storage

Reconstitution:

A Certificate of Analysis (CoA) containing reconstitution instructions is included with the products. Please refer to the CoA for detailed information.

Stability & Storage:

Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

Shipping:

In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

Protein Background

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 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. 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.

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