



LD Biopharma, Inc.
9924 Mesa Rim Road, Suite B
San Diego, CA 92121
Tel: 858-876-8266
<http://www.ldbiopharma.com>

- PRODUCT DATA SHEET -

Name of Product: Recombinant Human TIGIT Protein
Catalog Number: hRP-1804
Manufacturer: LD Biopharma, Inc.

Introduction

Human T-cell immunoreceptor with Ig and ITIM domain (TIGIT) gene encodes a member of the PVR (poliovirus receptor) family of immunoglobulin proteins. The product of this gene is expressed on several classes of T cells including follicular B helper T cells (TFH). The protein has been shown to bind PVR with high affinity; this binding is thought to assist interactions between TFH and dendritic cells to regulate T cell dependent B cell responses. Recent data indicated that TIGIT expressed on T cells that binds to CD155 on the dendritic cell surface, driving them to a more tolerogenic phenotype.

Full-length extracellular domain of human TIGIT cDNA (22 - 141aa, derived from BC067537) was constructed with codon optimization gene synthesis technology and expressed with a small T7-His-TEV cleavage site Tag (29aa) fusion at its N-terminal. This protein was expressed in *E. coli* as inclusion bodies. The final product was refolded using our unique “temperature shift inclusion body refolding” technology and chromatographically purified.

Gene Symbol: TIGIT (VSIG9; VSTM3; WUCAM)
Accession Number: NP_776160.2
Species: Human
Size: 50 µg / Vial
Composition: 1.0 mg/ml, sterile-filtered, in 20 mM pH 8.0 Tris-HCl Buffer, with proprietary formulation of NaCl, KCl, EDTA, Sucrose and DTT.
Storage: In Liquid. Keep at -80°C for long term storage. Product is stable at 4 °C for at least 30 days.

Key References

Ester Lozano, et al., *The TIGIT/CD226 Axis regulates human T cell function*. *J. Immunol.* 188 (1), 3869-3875 (2012)



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Fuhrman CA, et al., *Divergent Phenotypes of Human Regulatory T Cells Expressing the Receptors TIGIT and CD226*. J. Immunol. 195 (1), 145-155 (2015)

Chauvin, J.M., et al., *TIGIT and PD-1 impair tumor antigen-specific CD8(+) T cells in melanoma patients*. J. Clin. Invest. 125 (5), 2046-2058 (2015)

Bin Dhuban K, et al., *Coexpression of TIGIT and FCRL3 identifies Helios+ human memory regulatory T cells*. J. Immunol. 194 (8), 3687-3696 (2015)

Applications

1. May be used for in vitro TIGIT mediated CD226/CD155 pathway activation regulation study for T and dendritic cells with this protein as either matrix protein or soluble factor.
2. May be used for protein-protein interaction mapping.
3. May be used as specific substrate protein for kinase, ad ubiquitin (Sumo pathway) related enzyme functional screening assays.
4. Potential biomarker protein for monitoring CD4⁺ T cell activation status in various diseases, such as autoimmune disease
5. As immunogen for specific antibody production.

Quality Control

Purity: > 90% by SDS-PAGE.

Recombinant Protein Sequence

MASMTGGQQMGRGHHHHHGNLYFQGGEFMMTGTTIETTGNISAEKGGSIILQCHLSSTTAQVTQ
VNWEQQDQLLAICNADLGWHISPSFKDRVAPGPGGLGLTLQSLTVNDTGEYFCIYHTYPDGTYTG
RIFLEVLESSVAEHGARFQIP