

DESCRIPTION

Source	Mouse myeloma cell line, NS0-derived		
	Mouse TIGIT (Gly26-Thr143) Accession # NP_001139797	IEGRMDP	Mouse IgG _{2A} (Glu98-Lys330)
	N-terminus		C-terminus

N-terminal Sequence Analysis	Gly26
Structure / Form	Disulfide-linked homodimer
Predicted Molecular Mass	40.1 kDa (monomer)

SPECIFICATIONS

SDS-PAGE	50-60 kDa, reducing conditions
Activity	Measured by its binding ability in a functional ELISA. When Recombinant Mouse CD155/PVR (Catalog # 6909-CD) is coated at 2.5 µg/mL (100 µL/well), the concentration of Recombinant Mouse TIGIT Fc Chimera that produces 50% optimal binding response is 10-50 ng/mL.
Endotoxin Level	<0.10 EU per 1 µg of the protein by the LAL method.
Purity	>95%, by SDS-PAGE visualized with Silver Staining and quantitative densitometry by Coomassie® Blue Staining.
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS. See Certificate of Analysis for details.

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 100 µg/mL in PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	Use a manual defrost freezer and avoid repeated freeze-thaw cycles. <ul style="list-style-type: none"> ● 12 months from date of receipt, -20 to -70 °C as supplied. ● 1 month, 2 to 8 °C under sterile conditions after reconstitution. ● 3 months, -20 to -70 °C under sterile conditions after reconstitution.

BACKGROUND

TIGIT (T cell Immunoreceptor with Ig and ITIM domains), also called Vstm3 (V-set and transmembrane domain-containing 3), Vsig9 (V-set and Ig domain-containing 9) and WUCAM (Washington University cell adhesion molecule) is a 30-34 kDa type I transmembrane protein that is a member of the CD28 family within the Ig superfamily of proteins (1-4). Mouse TIGIT cDNA encodes 241 amino acids (aa) including a 26 aa signal sequence, a 115 aa extracellular region with a V-type Ig-like domain and one potential N-glycosylation site, a 21 aa transmembrane sequence, and a 79 aa cytoplasmic domain with an ITIM motif (5). A 249 aa variant contains inserted aa after aa 21, 131 and 164 (6). Within the ECD, mouse TIGIT shares only 59-70% aa sequence identity with human, porcine, canine, equine and bovine TIGIT. TIGIT is expressed on NK cells and subsets of activated, memory and regulatory T cells, and particularly on follicular helper T cells within secondary lymphoid organs (1, 2, 7-9). It binds to CD155/PVR/Nectin-5 and Nectin-2/CD112/PVRL2 that appear on dendritic cells (DC) and endothelium (1-3, 8). Binding of TIGIT by DC induces IL-10 release and inhibits IL-12 production (2). Ligation of TIGIT on T cells down-regulates TCR-mediated activation and subsequent proliferation, while NK cell TIGIT ligation blocks NK cell cytotoxicity (7-9). Through CD155 and Nectin-2, which also interact with DNAM-1/CD226 and CD96/Tactile, TIGIT is part of an interacting network of Ig superfamily members that may augment or oppose each other (3, 4, 7, 8). In particular, TIGIT binding to CD155 can antagonize the effects of DNAM-1 (7, 8). Soluble TIGIT is able to compete with DNAM-1 for CD155 binding and attenuates T cell responses, while mice lacking TIGIT show increased T cell responses and susceptibility to autoimmune challenges (2, 3, 9, 10).

References:

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