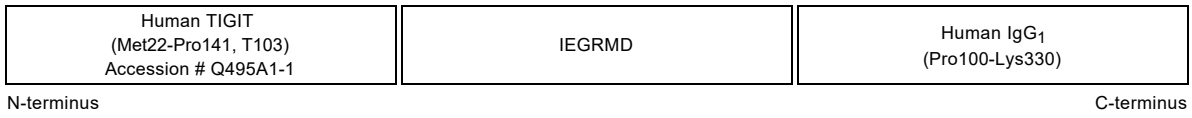
Recombinant Human TIGIT (T103) Fc Chimera

Catalog Number: 9464-TG

DESCRIPTION

Source	Human embryonic kidney cell, HEK293-derived human TIGIT protein



N-terminal Sequence Analysis	Met22
Structure / Form	Disulfide-linked homodimer
Predicted Molecular Mass	40 kDa

SPECIFICATIONS

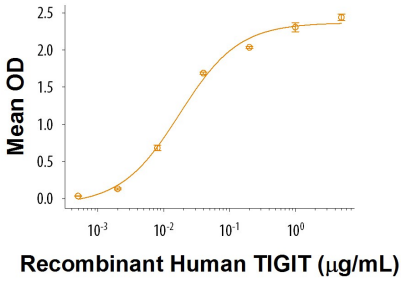
SDS-PAGE	44-60 kDa, reducing conditions
Activity	Measured by its binding ability in a functional ELISA. When Recombinant Human CD155/PVR (Catalog # 2530-CD) is coated at 2.5 µg/mL (100 µL/well), the concentration of Recombinant Human TIGIT (T103) Fc Chimera that produces 50% optimal binding response is typically 8-48 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 500 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.** • 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, -70 °C under sterile conditions after reconstitution.

DATA

Bioactivity



Recombinant Human TIGIT (T103) Fc Chimera Protein Bioactivity When Recombinant Human CD155/PVR (Catalog # Catalog # 2530-CD) is coated at 2.5 µg/mL (100 µL/well), Recombinant Human TIGIT (T103) Fc Chimera (Catalog # 9464-TG) binds with a typical ED_{50} of 8-48 ng/mL.

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Catalog Number: 9464-TG

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). Human TIGIT cDNA encodes 244 amino acids (aa) including a 21 aa signal sequence, a 120 aa extracellular region with a V-type Ig-like domain and two potential N-glycosylation site, a 21 aa transmembrane sequence, and an 82 aa cytoplasmic domain with an ITIM motif (5). A 170 aa variant diverges after aa 166 (5). Within the ECD, human TIGIT shares only 68-75% aa sequence identity with mouse, porcine, canine, equine and bovine TIGIT (1, 2). 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 (6-8). 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, 6, 7). In particular, TIGIT binding to CD155 can antagonize the effects of DNAM-1 (6, 7). 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, 8).

References:

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7. Stanietsky, N. *et al.* (2009) Proc. Natl. Acad. Sci. USA **106**:17858.
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