Human/Cynomolgus Monkey TIGIT Antibody

Recombinant Monoclonal Rabbit IgG Clone # 2629C
Catalog Number: MAB78982

DESCRIPTION

Species Reactivity	Human/Cynomolgus Monkey
Specificity	Detects Human/cynomolgus monkey TIGIT in direct ELISAs.
Source	Recombinant Monoclonal Rabbit IgG Clone # 2629C
Purification	Protein A or G purified from cell culture supernatant
Immunogen	Human embryonic kidney cell, HEK293-derived Human/cynomolgus monkey TIGIT protein Met22-Pro142 Accession # XP_00554815
Formulation	Lyophilized from a 0.2 μm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied either lyophilized or as a 0.2 μm filtered solution in PBS.

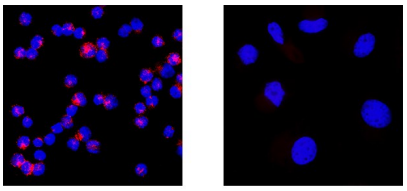
APPLICATIONS

Please Note: *Optimal dilutions should be determined by each laboratory for each application. General Protocols are available in the Technical Information section on our website.*

	Recommended Concentration	Sample
Immunocytochemistry	3-25 µg/mL	Immersion fixed human NK cells
Immunohistochemistry	3-25 µg/mL	Immersion fixed paraffin-embedded sections of human tonsil

DATA

Immunocytochemistry

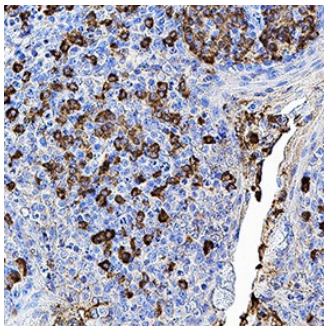


Positive (Human NK cells)

Negative (PC-3 cells)

TIGIT in Human NK cells. TIGIT was detected in immersion fixed human NK cells (positive) and PC-3 human prostate cancer cell line (negative control) using Rabbit Anti-Human/Cynomolgus Monkey TIGIT Monoclonal Antibody (Catalog # MAB78982) at 3 µg/mL for 3 hours at room temperature. Cells were stained using the NorthernLights™ 557-conjugated Anti-Rabbit IgG Secondary Antibody (red; Catalog # NL004) and counterstained with DAPI (blue). Specific staining was localized to cytoplasm. Staining was performed using our Fluorescent ICC Staining of Cells on Coverslips Protocol.

Immunohistochemistry



TIGIT in Human Tonsil. TIGIT was detected in immersion fixed paraffin-embedded sections of human tonsil using Rabbit Anti-Human/Cynomolgus Monkey TIGIT Monoclonal Antibody (Catalog # MAB78982) at 3 µg/mL for 1 hour at room temperature followed by incubation with the Anti-Rabbit IgG VisUCyte™ HRP Polymer Antibody Catalog # VC003. Before incubation with the primary antibody, tissue was subjected to heat-induced epitope retrieval using Antigen Retrieval Reagent-Basic Catalog # CTS013. Tissue was stained using DAB (brown) and counterstained with hematoxylin (blue). Specific staining was localized to cytoplasm in lymphocytes. Staining was performed using our IHC Staining with our VisUCyte HRP Polymer Detection Reagents Protocol.

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.5 mg/mL in sterile PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
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. • 6 months, -20 to -70 °C under sterile conditions after reconstitution.

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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. Cyno TIGIT shares 88.4% homology with human 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, 6-8). It binds to CD155/PVR/Necl-5 and Nectin-2/CD112/PVRL2 that appear on dendritic cells (DC) and endothelium (1-3, 7). 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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