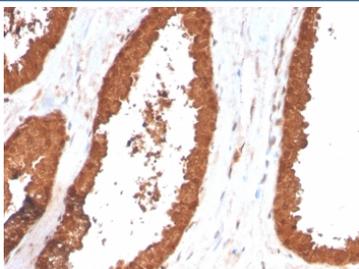


TIGIT Antibody / Immune Checkpoint Marker Antibody [clone TIGIT/3017] (V7583)

Catalog No.	Formulation	Size
V7583-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	100 ug
V7583-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	20 ug
V7583SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug
V7583IHC-7ML	Prediluted in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide; *For IHC use only*	7 ml

Bulk quote request

Availability	1-3 business days
Species Reactivity	Human
Format	Purified
Host	Mouse
Clonality	Monoclonal (mouse origin)
Isotype	Mouse IgG2c, kappa
Clone Name	TIGIT/3017
Purity	Protein G affinity chromatography
UniProt	Q495A1
Applications	ELISA (order BSA/sodium Azide-free Format For Coating) : Flow Cytometry : 1-2ug/million cells Immunohistochemistry (FFPE) : 1-2ug/ml for 30 min at RT
Limitations	This TIGIT Antibody / Immune Checkpoint Marker Antibody is available for research use only.

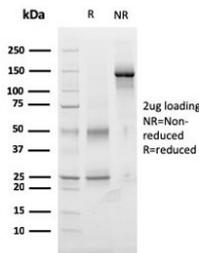


TIGIT Antibody Prostate Carcinoma IHC. Immunohistochemistry analysis of FFPE human prostate carcinoma tissue using TIGIT Antibody (clone TIGIT/3017) demonstrates HRP-DAB brown membranous and cytoplasmic staining in tumor-associated epithelial cells and infiltrating immune cells within the tumor microenvironment, consistent with TIGIT expression as an immune checkpoint marker involved in regulating local immune responses, while surrounding stromal elements show lower signal; nuclei are counterstained blue. HIERS: boil tissue sections in pH 6 10 mM citrate buffer for 10-20 min and allow to cool before testing.

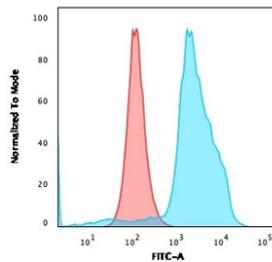
Human Protein Microarray Specificity Validation



TIGIT Antibody Microarray Specificity Validation. Analysis of HuProt(TM) microarray containing more than 19,000 full-length human proteins using TIGIT Antibody (clone TIGIT/3017) demonstrates highly specific detection of TIGIT, an immune checkpoint marker involved in T cell and NK cell regulation. The antibody shows a dominant signal for TIGIT with strong separation from other proteins on the array, supporting the high specificity of clone TIGIT/3017 for its intended target. Z- and S-score: The Z-score represents the strength of signal generated when the antibody binds to a protein on the array, expressed as standard deviations above the mean signal, while the S-score reflects the difference between sequential Z-scores and indicates relative specificity compared to potential off-target interactions.



SDS-PAGE analysis of purified, BSA-free TIGIT antibody (clone TIGIT/3017) as confirmation of integrity and purity.



TIGIT Antibody MOLT-4 FACS. Flow cytometry analysis of PFA-fixed human MOLT-4 cells using TIGIT Antibody (clone TIGIT/3017) shows a clear rightward shift in fluorescence intensity compared to isotype control, indicating cell surface TIGIT expression consistent with its role as an immune checkpoint marker on T cell populations involved in activation and inhibitory signaling.

Description

T cell immunoreceptor with Ig and ITIM domains (TIGIT) is a transmembrane immune receptor encoded by the TIGIT gene and expressed on activated T cells and natural killer cells, where it functions as a key regulator of immune checkpoint signaling. TIGIT Antibody / Immune Checkpoint Marker Antibody (clone TIGIT/3017) targets this protein, which is primarily localized to the cell membrane with additional cytoplasmic distribution reflecting receptor internalization and signaling dynamics. TIGIT antibody, also referred to as Vstm3 antibody and VSIG9 antibody in the literature, detects an important inhibitory receptor involved in modulating immune responses within both lymphoid tissues and the tumor microenvironment. This antibody is part of a collection of [Human Protein Microarray validated antibodies](#) that have been screened for specificity across thousands of proteins.

Functionally, TIGIT plays a central role in regulating T cell activation and immune tolerance by interacting with ligands such as CD155 and CD112. Upon ligand engagement, TIGIT transduces inhibitory signals through its intracellular ITIM domain, leading to reduced T cell proliferation, cytokine production, and cytotoxic activity. This signaling pathway contributes to the maintenance of immune homeostasis but can also promote immune suppression in cancer, where TIGIT expression is often associated with T cell exhaustion and reduced anti-tumor immunity. In natural killer cells, TIGIT similarly regulates cytotoxic function and immune surveillance.

TIGIT expression is observed in subsets of CD4+ and CD8+ T cells, regulatory T cells, and natural killer cells, particularly under conditions of chronic stimulation or activation. In tumor tissues such as prostate carcinoma, TIGIT-positive immune cells are frequently detected within the tumor microenvironment, where they contribute to local immune suppression and modulation of anti-tumor responses. In flow cytometry applications, TIGIT expression can be used to identify activated or exhausted T cell populations, making it a valuable marker for immune profiling and functional studies.

Structurally, TIGIT contains an extracellular immunoglobulin variable domain responsible for ligand binding, a single transmembrane region, and a cytoplasmic tail containing an ITIM motif that mediates inhibitory signaling. Interaction with ligands such as CD155 triggers downstream signaling pathways that involve recruitment of adaptor proteins and modulation of intracellular signaling cascades. TIGIT may also co-localize with other immune checkpoint receptors, including PD-1, contributing to coordinated regulation of immune responses.

Altered TIGIT expression is associated with a variety of disease contexts, particularly cancer and chronic viral infections, where persistent antigen exposure leads to increased expression of inhibitory receptors on immune cells. In oncology, TIGIT has emerged as a target of interest for immunotherapy, with therapeutic strategies aimed at blocking its inhibitory function to restore T cell activity. Increased TIGIT expression has also been reported in autoimmune and inflammatory conditions, reflecting its broader role in immune regulation.

This antibody provides reliable detection of TIGIT in both tissue and cell-based assays, supporting its use as an immune checkpoint marker in immunohistochemistry and flow cytometry applications. A TIGIT antibody is suitable for detecting this inhibitory receptor in studies of tumor immunology, T cell exhaustion, and immune regulation.

This antibody is part of a [broader antibody panel](#) offered by NSJ Bioreagents.

Application Notes

Optimal dilution of the TIGIT Antibody / Immune Checkpoint Marker Antibody should be determined by the researcher.

Immunogen

A recombinant human TIGIT protein fragment within amino acids 22-141 was used as the immunogen for the TIGIT antibody.

Storage

Store the TIGIT antibody at 2-8°C (with azide) or aliquot and store at -20°C or colder (without azide).

Alternate Names

TIGIT antibody, T cell immunoreceptor with Ig and ITIM domains antibody, Vstm3 antibody, VSIG9 antibody, TIGIT immune checkpoint antibody