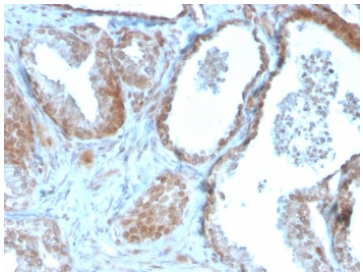
TIGIT Antibody / Tumor Immune Microenvironment Marker Antibody [clone TIGIT/3106] (V7584)

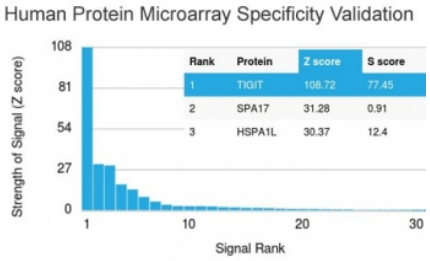
Catalog No.	Formulation	Size
V7584-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	100 ug
V7584-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	20 ug
V7584SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug
V7584IHC-7ML	Prediluted 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

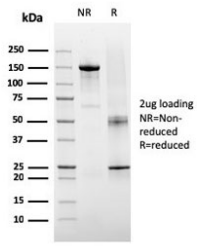
Availability	1-3 business days
Species Reactivity	Human
Format	Purified
Host	Mouse
Clonality	Monoclonal (mouse origin)
Isotype	Mouse IgG2b, kappa
Clone Name	TIGIT/3106
Purity	Protein G affinity chromatography
UniProt	Q495A1
Applications	ELISA (order BSA/sodium Azide-free Format For Coating) : Immunohistochemistry (FFPE) : 1-2ug/ml for 30 min at RT
Limitations	This TIGIT Antibody / Tumor Immune Microenvironment 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/3016) 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 a tumor immune microenvironment marker involved in immune checkpoint regulation, while surrounding stromal components show lower signal; nuclei are counterstained blue. HIER: boil tissue sections in pH 6 10 mM citrate buffer for 10-20 min and allow to cool before testing.



TIGIT Antibody Microarray Specificity Validation. Analysis of HuProt(TM) microarray containing more than 19,000 full-length human proteins using TIGIT Antibody (clone TIGIT/3016) demonstrates highly specific detection of TIGIT, a tumor-associated immune checkpoint marker involved in regulating T cell responses within the tumor microenvironment. The antibody shows a dominant signal for TIGIT with clear separation from other proteins on the array, supporting strong target specificity of clone TIGIT/3016. 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/3016) as confirmation of integrity and purity.

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 within the tumor microenvironment. TIGIT Antibody / Tumor Immune Microenvironment Marker Antibody (clone TIGIT/3106) 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 inhibitory receptor that plays a central role in modulating immune responses in cancer and chronic inflammatory conditions. 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 regulates immune cell activity through interaction with ligands such as CD155 and CD112, leading to suppression of T cell proliferation, cytokine production, and cytotoxic function. This inhibitory signaling pathway contributes to immune tolerance under normal conditions but is frequently co-opted in cancer to promote immune evasion. TIGIT expression is strongly associated with T cell exhaustion and impaired anti-tumor immunity, making it a critical component of immune checkpoint pathways targeted in cancer immunotherapy.

In tumor tissues such as prostate carcinoma, TIGIT-positive immune cells are commonly observed within the tumor microenvironment, including tumor-infiltrating lymphocytes and other immune cell populations. Immunohistochemical detection of TIGIT highlights these immune components and provides insight into the local immune landscape and checkpoint activity. This pattern of expression supports the use of TIGIT as a marker for evaluating immune suppression and immune cell infiltration in solid tumors.

Structurally, TIGIT contains an extracellular immunoglobulin-like domain responsible for ligand binding, a single transmembrane region, and a cytoplasmic tail containing an ITIM motif that mediates inhibitory signaling. Upon ligand engagement, TIGIT recruits intracellular signaling molecules that modulate downstream pathways involved in immune regulation. TIGIT may also co-localize with other checkpoint receptors such as PD-1, contributing to coordinated regulation of immune responses in the tumor microenvironment.

Altered TIGIT expression is associated with multiple disease contexts, particularly cancer and chronic viral infections. In oncology, elevated TIGIT expression correlates with immune suppression and tumor progression, while therapeutic targeting of TIGIT is being explored to enhance anti-tumor immunity. In inflammatory conditions, TIGIT contributes to

maintaining immune balance by limiting excessive immune activation.

Supported by protein microarray validation demonstrating strong target specificity, this antibody provides reliable detection of TIGIT in tissue-based assays. A TIGIT antibody is suitable for detecting this tumor-associated immune checkpoint marker in immunohistochemistry applications focused on tumor immunology, immune infiltration, and checkpoint pathway analysis. For broader analysis of TIGIT as an immune checkpoint marker across applications, see our TIGIT antibody TIGIT/3017.

Application Notes

Optimal dilution of the TIGIT Antibody / Tumor Immune Microenvironment Marker Antibody should be determined by the researcher.
1. The prediluted format is supplied in a dropper bottle and is optimized for use in IHC. After epitope retrieval step (if required), drip mAb solution onto the tissue section and incubate at RT for 30 min.

Immunogen

A recombinant human TIGIT protein fragment within amino acids 194-244 was used as the immunogen for the TIGIT antibody.

Storage

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

Alternate Names

TIGIT antibody, T cell immunoreceptor with Ig and ITIM domains antibody, Vstm3 antibody, VSIG9 antibody, TIGIT tumor marker antibody

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