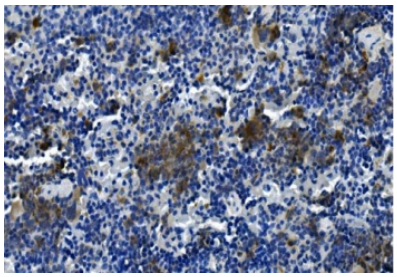
TIGIT Antibody / Broad Epitope Detection Antibody (RQ6213)

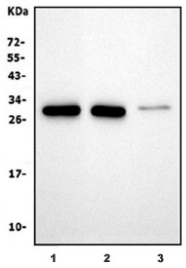
Catalog No.	Formulation	Size
RQ6213	0.5mg/ml if reconstituted with 0.2ml sterile DI water	100 ug

Bulk quote request

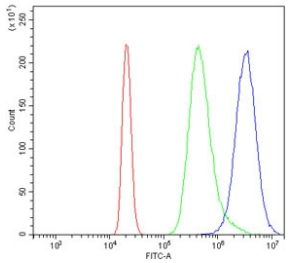
Availability	1-3 business days
Species Reactivity	Mouse, Rat
Format	Antigen affinity purified
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Affinity purified
Buffer	Lyophilized from 1X PBS with 2% Trehalose and 0.0125% sodium azide
UniProt	P86176
Applications	Western Blot : 1-2ug/ml Immunohistochemistry (FFPE) : 2-5ug/ml Flow Cytometry : 1-3ug/million cells Direct ELISA : 0.1-0.5ug/ml
Limitations	This TIGIT Antibody / Broad Epitope Detection Antibody is available for research use only.



TIGIT Antibody Mouse Spleen IHC. Immunohistochemistry analysis of FFPE mouse spleen tissue using TIGIT Antibody demonstrates HRP-DAB brown membranous and cytoplasmic staining in subsets of lymphoid cells within the splenic parenchyma, consistent with TIGIT expression on activated T cells and NK cells, and reflecting broad epitope detection across immune cell populations, while surrounding cells show lower signal; nuclei are counterstained blue. HIER: boil tissue sections in pH 8 EDTA for 20 min and allow to cool before testing.



TIGIT Antibody Rat and Mouse Tissue WB. Western blot analysis of rat spleen, rat plasma, and mouse spleen lysates using TIGIT Antibody detects a band at the predicted molecular weight of approximately 26 kDa, consistent with TIGIT expression in lymphoid tissues, with slightly higher apparent molecular weight likely reflecting glycosylated forms of this immune checkpoint receptor, and supporting broad epitope detection across species and sample types.



TIGIT Antibody RAW264.7 FACS. Flow cytometry analysis of mouse RAW264.7 cells using TIGIT Antibody shows a clear rightward shift in fluorescence intensity compared to cells alone and isotype control, indicating TIGIT expression on the cell surface consistent with its role as an immune checkpoint receptor, and supporting broad epitope detection across immune cell populations.

Description

T cell immunoreceptor with Ig and ITIM domains (TIGIT) is a transmembrane protein encoded by the TIGIT gene and expressed on activated T cells and natural killer cells, where it functions as an important regulator of immune checkpoint signaling. TIGIT Antibody / Broad Epitope Detection Antibody (Rabbit Polyclonal) targets this receptor, which is primarily localized to the cell membrane with additional cytoplasmic distribution reflecting receptor internalization and signaling activity. TIGIT antibody, also referred to as Vstm3 antibody and VSIG9 antibody in the literature, detects an inhibitory immune receptor involved in modulating T cell activation and immune responses.

Functionally, TIGIT plays a key role in immune regulation by interacting with ligands such as CD155 and CD112, leading to suppression of T cell proliferation, cytokine production, and cytotoxic function. This signaling contributes to immune homeostasis but is also associated with immune suppression in cancer and chronic inflammatory conditions. TIGIT expression is frequently linked to T cell exhaustion and reduced anti-tumor immunity, making it an important target in studies of immune checkpoint pathways and immunotherapy.

As a rabbit polyclonal reagent, this antibody recognizes multiple epitopes on the TIGIT protein, supporting detection across diverse biological samples and experimental conditions. This broader epitope recognition can facilitate consistent detection of TIGIT in immune cell populations where expression levels or conformational states may vary. TIGIT is expressed on subsets of CD4+ and CD8+ T cells, regulatory T cells, and natural killer cells, and can be identified in both lymphoid tissues and tumor microenvironments where immune checkpoint activity is prominent.

Structurally, TIGIT contains an extracellular immunoglobulin variable domain responsible for ligand binding, a transmembrane region, and a cytoplasmic tail containing an ITIM motif that mediates inhibitory signaling. Engagement of TIGIT leads to recruitment of intracellular signaling components that regulate downstream immune responses. TIGIT may also function in coordination with other immune checkpoint receptors, including PD-1, contributing to complex regulation of immune activity in both normal and disease contexts.

Altered TIGIT expression is associated with a range of pathological conditions, including cancer, chronic viral infection, and inflammatory disorders. In tumor settings, TIGIT-positive immune cells are often present within the tumor microenvironment and contribute to local immune suppression. In immune profiling studies, TIGIT serves as a marker of inhibitory signaling and cellular activation states, providing insight into immune regulation and dysfunction.

This antibody provides reliable detection of TIGIT across immune cell populations and sample types, supporting its use in applications requiring broad epitope recognition. A TIGIT antibody is suitable for detecting this immune checkpoint receptor in research applications focused on T cell biology, immune regulation, and checkpoint signaling pathways. For a

monoclonal antibody optimized for immune checkpoint marker studies, see our TIGIT antibody.

Application Notes

Optimal dilution of the TIGIT Antibody / Broad Epitope Detection Antibody should be determined by the researcher.

Immunogen

A mouse recombinant partial protein (amino acids T29-G249) was used as the immunogen for the Tigit antibody.

Storage

After reconstitution, the Tigit antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.

Alternate Names

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