

TIGIT (E6L7H) Rabbit mAb

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For Research Use Only. Not for Use in Diagnostic Procedures.

Applications: W, IP	Reactivity: H	Sensitivity: Endogenous	MW (kDa): 18, 30-40	Source/Isotype: Rabbit IgG	UniProt ID: #Q495A1	Entrez-Gene Id: 201633
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Product Usage Information**Application**

Western Blotting
Immunoprecipitation

Dilution

1:1000
1:50

Storage

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at -20°C. Do not aliquot the antibody.

Specificity/Sensitivity

TIGIT (E6L7H) Rabbit mAb recognizes endogenous levels of total TIGIT protein. This antibody cross-reacts with an unidentified protein of 50 kDa and 75 kDa in some cell extracts.

Source / Purification

Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Val228 of human TIGIT protein.

Background

T-cell immunoreceptor with Ig and ITIM domains (TIGIT), also known as VSIG9, VSTM3, and WUCAM, is a member of the poliovirus receptor family of immunoglobulin proteins (1-3). TIGIT is expressed at low levels on subsets of T cells and NK cells, and is upregulated at the protein level following activation of these cells (1-4). TIGIT marks exhausted T cells in the tumor microenvironment (5) and during human immunodeficiency virus (HIV) infection (6). Research has shown TIGIT interacts with several receptors expressed on antigen presenting cells, such as dendritic cells and macrophages, as well as tumor cells and cells of the microenvironment. TIGIT binds with high affinity to PVR/CD155, and with low affinity to Nectin-2/CD112 and Nectin-3/CD113 (2,4,7). Upon binding to its ligands, TIGIT suppresses T cell activation, and inhibits T and NK cell cytotoxicity. This inhibition can be blocked using monoclonal antibodies directed at the extracellular domain of TIGIT, resulting in rejuvenated antigen-specific CD8⁺ T cell responses in tumors and during HIV infection (5,6,8). Three potential isoforms of TIGIT have been computationally mapped (9).

Background References

1. Yu, X. et al. (2009) *Nat Immunol* 10, 48-57.
2. Levin, S.D. et al. (2011) *Eur J Immunol* 41, 902-15.
3. Boles, K.S. et al. (2009) *Eur J Immunol* 39, 695-703.
4. Stanietzky, N. et al. (2009) *Proc Natl Acad Sci U S A* 106, 17858-63.
5. Chauvin, J.M. et al. (2015) *J Clin Invest* 125, 2046-58.
6. Chew, G.M. et al. (2016) *PLoS Pathog* 12, e1005349.
7. Stengel, K.F. et al. (2012) *Proc Natl Acad Sci U S A* 109, 5399-404.
8. Johnston, R.J. et al. (2014) *Cancer Cell* 26, 923-37.
9. Bechtel, S. et al. (2007) *BMC Genomics* 8, 399.

Species Reactivity

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

Western Blot Buffer

IMPORTANT: For western blots, incubate membrane with diluted primary antibody in 5% w/v nonfat dry milk, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.

Applications Key

W: Western Blotting **IP:** Immunoprecipitation

Cross-Reactivity Key

H: Human

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