

Anti-Human TIGIT (Clone 4E1.2) Purified *in vivo* GOLD™ Functional Grade Monoclonal Antibody

Product Information

Product No.: T810
Clone: 4E1.2
Isotype: Mouse IgG3k
Storage: 2-8°C

Product Description

Specificity:

Clone 4E1.2 activity is directed against human TIGIT (WUCAM).

Antigen Distribution:

TIGIT is expressed on activated CXCR5⁺CD4⁺ T cells in peripheral blood, variably on CD8⁺ T cells and CD56⁺CD3⁺ NK cells, and constitutively in tonsils on some CD3⁺CD8^{int} T cells as well as the CXCR5^{high}/ICOS^{high} subset of CD4⁺ T cells that contains fully differentiated T_{FH} cells.

Background:

TIGIT (WUCAM) is an immunoreceptor that inhibits multiple immune cell responses, including T cell priming by dendritic cells, tumor cell killing by NK cells and cytotoxic T cells, and also enhances the immune suppressive activity of regulatory T cells¹. TIGIT is a novel member of the Ig-superfamily distantly related to Nectins and Neclns that aligns with the distal Ig-V-type domains of Nectin⁽¹⁻⁴⁾, poliovirus receptor (PVR; CD155), DNAM-1 (CD226), and TACTILE (CD96)². TIGIT is preferentially expressed on human B helper follicular T cells and binds with high affinity to PVR under both static and flow conditions. Additionally, TIGIT, DNAM-1, and TACTILE are expressed together on T cells and NK cells and share PVR as a ligand¹. TIGIT is not detectable on the surface of resting peripheral blood mononuclear cells from healthy donors unless activated². 4E1.2 was generated by immunizing BALB/c mice with TIGIT^{FLAG}-Baf3 cells². Baf3 cells transfected with TIGIT cDNA are specifically stained by 4E1.2. Blocking with 4E1.2 significantly reduces PVR-hFc binding to TIGIT/Baf3 and to ICOS^{high} CD4⁺ T cells. TIGIT-PVR interactions are important for regulating T cell function and contribute to T cell-dependent B cell responses. TIGIT is an attractive target for cancer therapy due to its role as an immune checkpoint¹. Immunotherapy targeting TIGIT and the PD-1/PD-L1 pathway is capable of tumor suppression. Other combinations, such as TIGIT with TIM-3, CD112R, or TACTILE, have also shown promise in blocking studies.

Known Reactivity Species:

Human

Format:

in vivo GOLD™, Purified *in vivo* Functional Grade

Formulation

This monoclonal antibody is aseptically packaged and formulated in 200 mM arginine, 50 mM histidine, and 100 mM NaCl at a pH of 6.4 – 6.6, with no carrier protein, potassium or preservatives added. Due to inherent biochemical properties of antibodies, certain products may be prone to precipitation over time. Precipitation may be removed by aseptic centrifugation and/or filtration.

Purity

≥95% monomer by analytical SEC, >95% by SDS Page

Endotoxin

< 1.0 EU/mg as determined by the LAL method

Storage and Stability

Functional grade preclinical antibodies may be stored sterile as received at 2-8°C for up to one month. For longer term storage, aseptically aliquot in working volumes without diluting and store at ≤ -70°C. **Avoid Repeated Freeze Thaw Cycles.**

Products are for research use only. Not for use in diagnostic or therapeutic procedures.

Product Datasheet

www.leinco.com



Product Preparation

Functional grade preclinical antibodies are manufactured in an animal free facility using *in vitro* cell culture techniques and are purified by a multi-step process including the use of protein A or G to assure extremely low levels of endotoxins, leachable protein A or aggregates.

Country of Origin

USA

References

1. Harjunpää H, Guillerey C. Clin Exp Immunol. 200(2):108-119. 2020.
2. Boles KS, Vermi W, Facchetti F, et al. Eur J Immunol. 39(3):695-703. 2009.

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