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# Anti-Mouse TIGIT (clone 1G9)
## Purified *in vivo* GOLD™ Functional Grade
### Hybridoma Monoclonal Antibody

## Product Information
**Product No.:** T735
**Clone:** 1G9
**Isotype:** Mouse IgG1 κ

## Product Description
**Specificity:**
Clone 1G9 activity is directed against mouse TIGIT.
**Antigen Distribution:**
TIGIT is expressed on NK cells, activated T cells, memory T cells, and a subset of regulatory T cells.
**Background:**
TIGIT 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 cells[1]. TIGIT is a novel member of the Ig-superfamily distantly related to Nectins and Necls that aligns with the distal Ig-V-type domains of Nectin1-4, poliovirus receptor (PVR; CD155), DNAM-1 (CD226), and TACTILE (CD96)[2]. TIGIT is an attractive target for cancer therapy due to its role as an immune checkpoint[1,3]. Immunotherapy targeting TIGIT and the PD-1/PD-L1 pathway is capable of tumor suppression.
1G9 was generated by immunizing TIGIT$^{-/-}$ mice with recombinant mouse TIGIT tetramers[3]. Draining lymph nodes were collected and fused with Sp2/0-Ag14. Supernatants were screened for specific binding by anti-TIGIT ELISA and flow cytometry. Hybridomas that showed TIGIT-specific binding were expanded and subcloned and single colonies sorted by flow cytometry. Comparative immunofluorescence staining of activated primary TIGIT-expressing wildtype T cells and TIGIT$^{-/-}$ T cells was performed to confirm specificity. 1G9 was found to fully block TIGIT binding to CD155, a high-affinity TIGIT ligand. However, 1G9 does not deplete TIGIT$^{+}$ cells in vivo under steady-state conditions. Additionally, 1G9 does not affect T cell proliferation in vitro. 1G9 has agonistic anti-TIGIT activity in vivo, leading to a reduction in T cell expansion and pro-inflammatory cytokine production, and is also able to reduce experimental autoimmune encephalomyelitis (EAE) severity in mice.
**Known Reactivity Species:**
Mouse
**Format:**
in vivo GOLD™
**Immunogen:**
Recombinant murine TIGIT tetramers.
**Formulation**
This monoclonal antibody is aseptically packaged and formulated in 0.01 M phosphate buffered saline (150 mM NaCl) PBS pH 7.2 - 7.4 with no carrier protein, potassium, calcium 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.**

## Product Preparation

Functional grade preclinical antibodies are manufactured in an animal free facility using only *in vitro* protein free 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.

## Other Applications Reported in Literature:

**ELISA,**
**FA,**
**FC**

## 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.
3 Dixon KO, Schorer M, Nevin J, et al. J Immunol. 200(8):3000-3007. 2018.
4 Chen Y, Huang H, Li Y, et al. Front Immunol. 13:832230. 2022.