

Anti-Ly49C (Clone 4LO3311) **Purified *in vivo* GOLD™ Functional Grade** **Monoclonal Antibody**

Product Information

Product No.: L244
Clone: 4LO3311
Isotype: Mouse IgG3κ
Storage: 2-8°C

Product Description

Specificity:

4LO3311 activity is directed against Ly49C (Killer cell lectin-like receptor 3, KLRA3; NK2.1). 4LO3311 binds an epitope located in a 32-amino acid segment of the stalk region immediately adjacent to the carbohydrate recognition domain.

Antigen Distribution:

Ly49C is expressed on NK, uterine NK, NKT, and CD8+ T cells.

Background:

Ly49 receptors are homodimeric type II C-type lectin-like membrane glycoproteins encoded by a family of highly polymorphic genes in the mouse natural killer (NK) gene complex¹. Ly49 receptors recognize class I major histocompatibility complex-I (MHC-1) and MHC-1 like proteins. Ly49C is an inhibitory member of the Ly-49 superfamily. Inhibitory Ly49 receptors are involved in NK cell education¹ and play a role in controlling viral infection². Additionally, Ly49C decreases the activation threshold of NK cells by inhibiting H2-K^b³. Ly49C is expressed on NK, uterine NK, NKT, and CD8+ Tregs cells¹. Ly49C is closely related to Ly49F, Ly49I, and Ly49H³. 4LO3311 was generated by immunizing 129/SvJ mice with C57BL/6 NK-enriched spleen cells⁴. Hybridoma lines were prepared by fusing immune spleen cells with non-secreting P3X63-Ag8.653 myeloma cells and subsequently screened for production of anti-NK antibodies. Isotype was determined by double-immunodiffusion analysis of hybridoma supernatants using rabbit monospecific anti-mouse immunoglobulins. 4LO3311 is of IgG3, κ isotype. 4LO3311 recognizes an epitope located in a 32-amino acid segment of the stalk region immediately adjacent to the carbohydrate recognition domain⁵. 4LO3311 recognizes Ly-49C^{BALB} but not Ly-49A^{B6}, Ly-49A^{BALB}, B^{BALB}, D^{B6}, E^{B6}, F^{B6}, G^{B6}, G^{BALB}, or H. 4LO3311 plus complement inhibits NK cell and antibody-dependent cellular cytotoxicity (ADCC) activity in C3H spleen cells⁴. 4LO3311 inhibits C57BL/6 and C3H NK cell activity but has no effect on NZB NK cells.

Known Reactivity Species:

Mouse

Format:

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

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.**

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. Rahim MM, Tu MM, Mahmoud AB, et al. Front Immunol. 5:145. 2014.
2. Parikh BA, Bern MD, Piersma SJ, et al. Cell Rep. 32(4):107969. 2020.

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