Product Datasheet
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Ly49C Antibody
HRP
Monoclonal Antibody

Product Information

Product No.:	L312
Clone:	4LO3311
Isotype:	Mouse IgG3κ
Storage:	Sterile 2 to 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-Kb 3. 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-49CBALB but not Ly-49AB6, Ly-49ABALB, BBALB, DB6, EB6, FB6, GB6, GBALB, 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:
R-phycoerythrin (PE)

Formulation
This R-phycoerythrin (R-PE) conjugate is formulated in 0.01 M phosphate buffered saline (150 mM NaCl) PBS pH 7.4, 1% BSA and 0.09% sodium azide as a preservative.

Storage and Stability
This R-phycoerythrin (R-PE) conjugate is stable when stored at 2-8°C. Do not freeze.

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.

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Pathogen Testing

To protect mouse colonies from infection by pathogens and to assure that experimental preclinical data is not affected by such pathogens, all of Leinco's Purified Functional PLATINUM™ antibodies are tested and guaranteed to be negative for all pathogens in the IDEXX IMPACT I Mouse Profile.

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.
3) Schenkel AR, Kingry LC, Slayden RA. Front Immunol. 4:90. 2013.
4) Lemieux S, Ouellet-Talbot F, Lusignan Y, et al. Cell Immunol. 134(1):191-204. 1991.
5) Brennan J, Lemieux S, Freeman JD, et al. J Exp Med. 184(6):2085-2090. 1996.
6) Hsu J, Hodgins JJ, Marathe M, et al. J Clin Invest. 128(10):4654-4668. 2018.
7) Depatie C, Chalifour A, Paré C, et al. Int Immunol. 11(9):1541-1551. 1999.