

Product Datasheet

www.leinco.com



Anti-Human CD2 [Clone LO-CD2a] — Purified *in vivo* PLATINUM™ Functional Grade

Hybridoma Monoclonal Antibody

Product Information

Product No.:	C529
Clone:	LO-CD2a
RRID:	AB_2828910
Isotype:	Rat Rat IgG2b κ
Storage:	Sterile 2-8°C

Product Description

Specificity:

Anti-CD2 antibody (clone LO-CD2a) activity is directed against human CD2.

Antigen Distribution:

CD2 is expressed on all mature human T cells, most thymocytes, NK cells and a small proportion of bone marrow cells.

Background:

Human CD2 is a 351 amino acid transmembrane glycoprotein that is part of the immunoglobulin superfamily^{1, 2}. CD2 is expressed on the surface of mature T cells, most NK cells, thymocytes, dendritic cells, and 9-12% of bone marrow cells. CD2 participates in T cell and NK cell activation and is important for thymocyte development and assembly of the immunological synapse¹. However, the role of CD2 in murine immunity is not always consistent with its function in higher animals. CD2 is known to bind to lymphocyte-associated antigen³ (CD58 and its murine analog CD48) as well as CD59.

LO-CD2a was developed as an immunosuppressive agent for use in organ allotransplantation^{3, 4}. LO-CD2a strongly inhibits mixed lymphocyte culture³ and induces T cell apoptosis⁵. Additionally, LO-CD2a induces very low levels of cytokine release, inhibits cytokine production induced by OKT3, and induces human T cell hyporesponsiveness³. The immune response is inhibited as a result of cell lysis by antibody-dependent cell mediated cytotoxicity (ADCC) induced by NK cells and activated monocytes and from CD2 down-modulation on CD2+ cells⁶. LO-CD2a also strongly inhibits proliferation of peripheral blood mononuclear cells stimulated with soluble OKT3. LO-CD2a has demonstrated immunosuppressive activity *in vitro* and effective T cell depletion *in vivo*. Unresponsiveness upon restimulation with the same antigen makes LO-CD2 distinct from other anti-CD2 antibodies⁷.

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

410 Axminster Dr, St. Louis, MO 63026

(800) 538-1145

leincoglobal@leinco.com

Product Datasheet

www.leinco.com

Known Reactivity Species:

Human

Format:

Purified in vivo Functional Grade, in vivo PLATINUM™

Immunogen:

Purified human T Lymphocytes

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

≥98% monomer by analytical SEC, >95% by SDS Page

Endotoxin

<0.5 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 *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.

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.

Other Applications Reported in Literature:

FC,
FA,
ELISA

Country of Origin

USA



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

410 Axminster Dr, St. Louis, MO 63026

(800) 538-1145

leincoglobal@leinco.com

Product Datasheet

www.leinco.com



References

1. Binder C, Cvetkovski F, Sellberg F, et al. Front Immunol. 11:1090. 2020.
2. Bierer BE, Sleckman BP, Ratnofsky SE, et al. Annu Rev Immunol. 7:579–599. 1989.
3. Latinne D, De La Parra B, Nizet Y, et al. Int Immunol. 8(7):1113-1119. 1996.
4. Bazin H, Latinne D, et al, inventors; Biotransplant Inc, assignee. LO-CD2a antibody and uses thereof for inhibiting T cell activation and proliferation. US patent 6,849,258 B1. Feb 1, 2005.
5. Dumont C, Déas O, Mollereau B, et al. J Immunol. 160(8):3797-3804. 1998.
6. Nizet Y, Chentoufi AA, de la Parra B, et al. Transplantation. 69(7):1420-1428. 2000.
7. Xu Y, Kolber-Simonds D, Hope JA, et al. Clin Exp Immunol. 138(3):476-483. 2004.

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

410 Axminster Dr, St. Louis, MO 63026

(800) 538-1145

leincoglobal@leinco.com