

Anti-Human CD166 (ALCAM) (Clone 3A6) Purified *in vivo* PLATINUM™ Functional Grade Monoclonal Antibody

Product Information

Product No.: C712
Clone: 3A6
Isotype: Mouse IgG1 κ

Product Description

Specificity:

3A6 activity is directed against human CD166 (ALCAM) and cross-reacts with ovine tissues.

Antigen Distribution:

CD166 is expressed on neurons, activated leukocytes, hematopoietic stem cells, mesenchymal stem cells, bone marrow stromal cells, activated T cells, activated B cells, activated monocytes, thymic epithelial cells, vascular endothelial cells, fibroblasts, keratinocytes, myeloid progenitors, tumor cells, and cancer stem cells.

Background:

Activated leukocyte cell adhesion molecule (ALCAM) is a member of the immunoglobulin superfamily and a cell surface glycoprotein¹. In normal physiology, ALCAM functions in cell adhesion, is known to promote T cell activation and proliferation by interacting with CD6, and functions in angiogenesis, monocyte transmigration, leukocyte intravasation across the blood-brain barrier, hematopoiesis, neurite extension, osteogenesis, and embryonic implantation in the uterus. In cancer, ALCAM is a prognostic marker of disease progression and acts as a modulator of progression by controlling cell proliferation, adhesion, migration, and invasion.

ALCAM participates in homophilic ALCAM-ALCAM interactions as well as numerous heterophilic interactions¹. Ligands include CD6, galectin-8, endophilin-A3/galectin-8, CD9, S100B, and ezrin. Additionally, SOSTDC1 is a novel ligand of ALCAM that promotes invasion and facilitates liver metastasis in colorectal cancer through activation of the Src-P13K/AKT pathways². ALCAM is a type I transmembrane molecule with a large glycosylated extracellular domain¹. Two isoforms have been confirmed at the protein level: ALCAM-Iso1, which is the full length isoform, and ALCAM-Iso2, which lacks exon 13. ALCAM is proteolytically cleaved at its extracellular domain by the transmembrane metalloprotease ADAM17, with ALCAM-Iso2 more susceptible to cleavage.

3A6 was produced by immunizing mice with human thymic epithelial cells and then fusing spleen cells with P3X63Ag8 myeloma cells³. 3A6 cross reacts with ovine mesenchymal stromal cells from iliac crest bone marrow aspirates⁴.

Known Reactivity Species:

Human

Format:

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

Immunogen:

Cultured human thymic epithelial cells

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

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

Product Datasheet

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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 $\leq -70^{\circ}\text{C}$. **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.

Applications

Applications and Recommended Usage (Quality Tested By Leinco):

FC

Other Applications Reported in Literature:

IHC,

IP,

IF,

IF Microscopy

Country of Origin

USA

References

1. Ferragut F, Vachetta VS, Troncoso MF, et al. Cytokine Growth Factor Rev. 61:27-37. 2021.
2. Bartolomé RA, Pintado-Berninches L, Jaén M, et al. Oncogene. 39(38):6085-6098. 2020.

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