

Product Datasheet

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Anti-Mouse CD31 (PECAM-1) [Clone 390] — Purified *in vivo* GOLD™ Functional Grade

Hybridoma Monoclonal Antibody

Product Information

Product No.: C2461
Clone: 390
Isotype: Rat Rat IgG2a κ

Product Description

Specificity:

390 activity is directed against mouse CD31 (PECAM-1).

Antigen Distribution:

PECAM-1 is expressed on the majority of non-erythroid hematopoietic cells, including platelets, monocytes, neutrophils, T cells, and B cell subsets, as well as on vascular endothelium and the endocardial cells of developing heart tissue.

Background:

PECAM-1 was the first immunoreceptor tyrosine-based inhibition motif (ITIM)-containing receptor to be identified in platelets and acts as a negative regulator of platelet activation¹. Platelet activation from a resting state has broad implications for many pathophysiological processes including atherosclerosis, angiogenesis, inflammation, wound repair, and cancer metastasis. PECAM-1 inhibits platelet activation and thrombosis at sites of vascular injury by attenuating immunoreceptor tyrosine-based activation motif (ITAM)-containing receptor complex GPVI-FcR γ -chain signaling and by acting as a positive regulator of $\alpha_{IIb}\beta_3$ -mediated outside-in signaling. PECAM-1, like all ITIM-containing receptors, belongs to the immunoglobulin receptor superfamily.

PECAM-1 also functions as a cell adhesion molecule and is capable of mediating calcium- dependent heterophilic aggregation². Additionally, PECAM-1 is expressed at cell-cell borders in the endocardial cells of the developing murine heart³. Because of its distribution pattern, PECAM-1 is a target molecule for the delivery of antithrombotic agents^{4,5,6,7}. Research is being conducted into the ability of PECAM-1 to deliver drugs to the endothelium.

Clone 390 was generated by immunizing rats with mouse 32D leukocyte cell line and screening against muPECAM-1 Δ 12,15^{3,8}. 390 binds to an epitope on Ig-domain 2 of muPECAM-1^{7,9}.

Known Reactivity Species:

Mouse

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

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**Format:**

in vivo GOLD™, Purified in vivo Functional Grade

Immunogen:

Mouse 32D leukocyte cell line

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:

B,
ELISA,
FA,
FC,
IF,
IHC,
IP,
Live Cell Imaging,
RIA

Country of Origin

USA

References

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