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Mouse CD40 Antibody

Purified in vivo GOLD™ Functional Grade

Monoclonal Antibody

Product Information

Product No.:	C2825
Clone:	FGK4.5
RRID:	AB_2829586
Isotype:	Rat IgG2a
Storage:	Sterile 2 to 8°C

Product Description

Specificity:
Clone FGK4.5 recognizes an epitope on mouse CD40.

Antigen Distribution:
CD40 is widely expressed on antigen-presenting cells such as dendritic cells, B cells, macrophages, and monocytes, in addition to non-immune endothelial cells, basal epithelial cells, and a variety of tumors.

Background:
CD40 is a 48 kD type I transmembrane glycoprotein that is a member of the TNFR superfamily. CD40, in association with its ligand CD154 (CD40L) - a 39 kD protein, acts as a costimulatory molecule for the activation of B cells, dendritic cells, monocytes, and other antigen presenting cells. CD40 is involved in Ig isotype switching and dendritic cell maturation, as well as the activation, differentiation and proliferation of B cells. CD40 interacts with TNFR2 and is involved in the regulation of signal transduction. CD40 is a potential target for cancer immunotherapy. Blocking the interaction of CD40 with its ligand (CD154) is the sought-after therapeutic objective for preventing and/or improving both autoimmune diseases and transplant rejection. Studies have shown that monoclonal antibodies that block CD154 in human clinical trials resulted in unanticipated vascular complications. Hence, an interest in the therapeutic potential for antagonist mAbs specific for human CD40 is emerging. Antibodies of particular therapeutic interest are those that do not inhibit CD40 signaling via physical competition with CD154. Additionally, the interaction of CD40 and its ligand (CD154) is found to be essential for amyloid-beta-induced microglial activation, thus plays a significant part in Alzheimer disease pathogenesis.

Known Reactivity Species:
Mouse

Format:
Purified in vivo GOLD™ Functional Grade

Immunogen:
Recombinant Mouse CD40 Fusion Protein

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

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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 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.

Applications
Applications and Recommended Usage (Quality Tested By Leinco):
FC The suggested concentration for this FGK4.5 antibody for staining cells in flow cytometry is ≤ 1.0 µg per 106 cells in a volume of 100 µl. Titration of the reagent is recommended for optimal performance for each application.

Country of Origin
USA

References
1) Grewall, I. S. et al. (1996) Science 73:1864 2. Schonbeck, U. et al. (1997) J. Biol. Chem. 272:19569
2) Armitage, R. J. et al. (1993) J. Immunol. 150:3671 4. Pullen, S. S. et al. (1999) Biochemistry 38:10168

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