

Anti-CD40 [FGK45] Standard Size Ab01627-7.1

Isotype and Format: Rat IgG2a, Kappa

Clone Number: FGK45

Alternative Name(s) of Target: Tnfrsf5; Tumor necrosis factor receptor superfamily member 5; B-cell surface antigen CD40; Bp50; CD40L receptor; FGK4.5

UniProt Accession Number of Target Protein: P27512

Published Application(s): Activating, agonist, functional assays, WB, FC

Published Species Reactivity: Mouse

Immunogen: The original rat IgG2a antibody was raised against the recombinant mouse CD40 fusion protein.

Specificity: This antibody recognizes CD40. It is a type I transmembrane glycoprotein that belongs to the tumor necrosis factor receptor (TNFR) superfamily. CD40 is expressed broadly on antigen-presenting cells (APCs) such as dendritic cells, B cells, macrophages, and monocytes as well as non-immune endothelial cells, basal epithelial cells, and a range of tumors. Upon binding to its ligand CD154, CD40 acts as a costimulatory molecule for the activation of B cells, dendritic cells, monocytes, and other APCs.

Application Notes: FGK45 is an agonistic antibody that has been shown to activate CD40 expressing antigen presenting cells (APCs) what might promote anti-tumor T cell responses. For instance, the rat IgG2a version of this antibody was used to promote maturation of APCs what improved the ability of the macrophages to fight a tumour (Luheshi et al., 2016; pmid: 26918344). Another group used the same antibody to stimulate T-cells in a study on a tumor vaccine (Bartkowiak et al., 2015; pmid: 26351680). Others used this clone as well to induce potent anti-tumor activity (Carmi et al., 2015; pmid: 25924063). On the other hand, it can also be used to inhibit CD40/CD154 interaction in vitro and in vivo. Furthermore, this clone can be also utilized to identify CD40-positive cells by flow cytometry (Rolink et al., 1996; pmid: 8885865). Administering this antibody can be also utilized to induce inflammatory bowel disease-like characteristics and create a mouse IBD model to study this class of diseases (Bauche et al., 2018; pmid: 30097293).

Antibody First Published in: Rolink et al. The SCID but not the RAG-2 gene product is required for S mu-S epsilon heavy chain class switching Immunity. 1996 Oct;5(4):319-30. doi: 10.1016/s1074-7613(00)80258-7. PMID:8885865

Note on publication: Describes the generation and characterization of the antibody FGK45.

Product Form

Size: 200 µg Purified antibody.

Purification: Protein A affinity purified

Supplied In: PBS with 0.02% Proclin 300.

Storage Recommendation: Store at 4°C for up to 3 months. For longer storage, aliquot and store at -20°C.

Concentration: 1 mg/ml.

Important note – This product is for research use only. It is not intended for use in therapeutic or diagnostic procedures for humans or animals.