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InnoCyto Inc.

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PE/iF594 Anti-Human CD40 Antibody

Catalog Number:	119105, 119106
Size:	25 tests, 100 tests
Target Name:	CD40, BP50, TNFRSF5
Regulatory Status:	RUO

PRODUCT DETAILS

Clone:	040AM1
Application:	Flow Cytometry
Reactivity:	Human
Format:	PE/iF594
Isotype:	Mouse IgG1
Antibody Type:	Monoclonal
Formulation:	Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide and 0.2% (w/v) BSA
Protein Concentration:	Supplied at a lot-specific concentration.
Storage & Handling:	The antibody solution should be stored undiluted between 2°C and 8°C, and protected from prolonged exposure to light. Do not freeze.
Recommended Usage:	For flow cytometric staining, it is recommended to use 5 µL of this reagent per 0.5-1.0 million cells in a 100 µL volume. Optimal reagent performance should be determined by titration for each specific application. PE/iF594 has an excitation max at 565 nm and an emission max at 603 nm.
Excitation Laser:	Blue Laser (488 nm) Green/Yellow laser (532/561nm)
Isotype Control:	301431

BACKGROUND INFORMATION

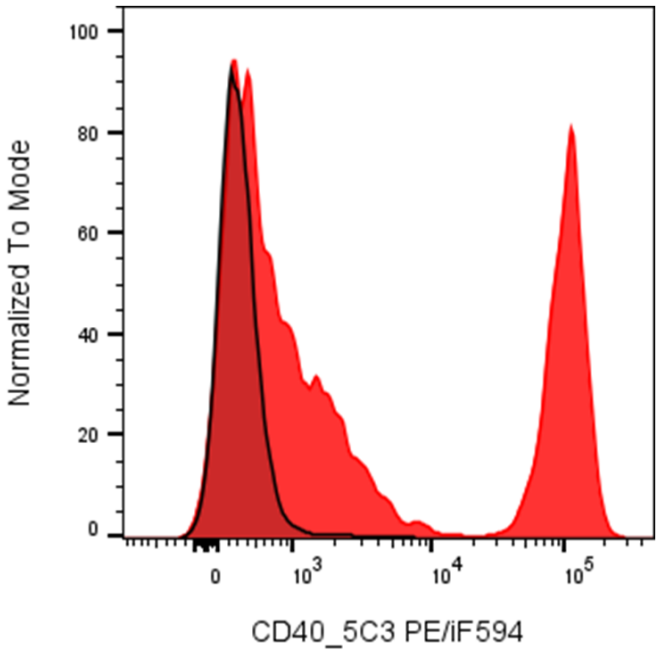
Human CD40 is a costimulatory receptor belonging to the tumor necrosis factor receptor (TNFR) superfamily, expressed on antigen-presenting cells such as B cells, dendritic cells, and macrophages, as well as some non-immune cells. It plays a central role in immune activation by promoting B-cell proliferation, immunoglobulin class switching, and dendritic cell maturation. Structurally, CD40 is a type I transmembrane protein with an extracellular domain composed of cysteine-rich repeats, a single transmembrane region, and a cytoplasmic tail that recruits adaptor proteins (e.g., TRAFs) to initiate downstream signaling pathways.

The primary ligand for CD40 is CD40L (CD154), expressed on activated T cells. Engagement of CD40 by CD40L triggers signaling cascades such as NF-κB activation, enhancing immune responses. Dysregulation of CD40 signaling is implicated in autoimmune diseases, chronic inflammation, and cancer. In oncology, CD40 can have dual roles: promoting anti-tumor immunity through immune activation, but also, in some contexts, supporting tumor cell survival.

Dacetuzumab is a humanized monoclonal antibody targeting CD40. It binds the extracellular domain and acts as a partial agonist,

stimulating CD40 signaling while also mediating antibody-dependent cellular cytotoxicity (ADCC). Clinically, dacetuzumab has been investigated רקיעב in B-cell malignancies such as non-Hodgkin lymphoma. By activating immune cells and directly targeting CD40-expressing tumor cells, it represents an immunomodulatory therapeutic strategy, although its efficacy has been variable and is often explored in combination regimens.

PRODUCT DATA



Human peripheral blood lymphocytes were stained with PE/iF594 Anti-Human CD40 clone 040AM1 (color-filled histogram) or an isotype control (gray histogram).

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