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APC Human CD30 (TNFRSF8) Protein (C-His)

Catalog Number:	804703, 804704
Size:	25 ug, 100 ug
Target Name:	TNFRSF8, CD30, Ki-1
Regulatory Status:	RUO

PRODUCT DETAILS

Application:	Flow Cytometry
Format:	Liquid, APC
Expression Host:	CHO
Species:	Human
Sources:	Recombinant Human CD30 protein (phe19-Lys379) with C-terminus His tag is expressed in CHO cells and conjugated to APC.
Accession Number:	P28908
Molecular Weight:	The protein has a predicted molecular weight of 40 kDa. Under DTT-reducing conditions, it migrates at approximately 50-80 kDa on SDS-PAGE prior to conjugation.
Affinity Tag:	C-His
Formulation:	1xPBS buffer, pH7.4, 0.09% NaN3 with a carrier protein
Endotoxin level:	Not tested
Protein Concentration:	25µg size is bottled at 0.1mg/mL concentration. 100 µg size is bottled at lot specific concentration.
Storage and Handling:	Briefly centrifuge the vial upon receipt. An unopened vial may be stored at 2–8°C for up to six months.

BACKGROUND INFORMATION

CD30, also known as TNFRSF8, is a type I transmembrane glycoprotein and a member of the tumor necrosis factor receptor (TNFR) superfamily. It is predominantly expressed on activated T and B lymphocytes, and under pathological conditions, on certain lymphoma and carcinoma cells. CD30 functions as a costimulatory receptor involved in regulating cell proliferation, survival, and apoptosis, depending on the context of activation. Its signaling is particularly important in immune cell regulation and inflammatory responses.

Structurally, CD30 consists of three main regions: an extracellular cysteine-rich domain, a single transmembrane domain, and a cytoplasmic tail. The extracellular domain contains multiple cysteine-rich repeats characteristic of TNFR family members, which are essential for ligand binding and receptor oligomerization. The cytoplasmic tail interacts with TNF receptor–associated factor (TRAF) adaptor proteins, initiating downstream signaling cascades such as NF-κB and MAPK pathways. These pathways influence cytokine production and cell fate decisions between survival and programmed cell death.

The primary ligand for CD30 is CD30 ligand (CD30L or CD153), a transmembrane protein belonging to the TNF ligand superfamily. CD30L is expressed mainly on activated T cells, B cells, and some macrophages. Interaction between CD30 and CD30L induces bidirectional signaling: CD30 engagement promotes cell activation or apoptosis depending on cellular context, while reverse signaling through CD30L can modulate immune cell function. The CD30/CD30L axis therefore plays a dual role in immune regulation, contributing to both immune activation and resolution.

In disease contexts, CD30 is clinically significant as a biomarker and therapeutic target. It is highly expressed in certain lymphoid malignancies, including Hodgkin lymphoma and anaplastic large cell lymphoma (ALCL). Its restricted normal expression and high density on tumor cells make CD30 an ideal target for immunotherapy. The most notable example is brentuximab vedotin, an antibody–drug conjugate that binds CD30 and delivers a cytotoxic payload directly to malignant cells. CD30-targeted therapies have achieved remarkable clinical success, leading to durable remissions in relapsed or refractory lymphomas. Moreover, CD30 expression is being explored in non-lymphoid cancers and autoimmune diseases, indicating broader therapeutic potential in modulating immune signaling and inflammation.

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