PERFORMANCE DATA SHEET
2012

For maximal recovery of contents please quick spin vial before opening

Human CD154 (CD40 Ligand) muCD8/Biotin*

CATALOG#: 505-030
QUANTITY: 25 µg **CONCENTRATION: 0.5 mg/ml**

Molecular Structure: A soluble fusion protein consisting of the extracellular domain (213aa) of human CD154 fused to the extracellular domain (167aa) of murine CD8 alpha.
Transfectant Cell Line: CHO

INFORMATION: Human CD154 (CD40 Ligand) is a member of the tumor necrosis factor (TNF) family and is expressed on the surface of activated T cells. Interaction of CD154 and CD40 is essential for isotype switching in B cells. Known genetic defects that alter this interaction lead to impaired immune system function (1). CD154 has been shown to be hyperexpressed by B and T cells in SLE patients (4). CD154 has been reported to be expressed on vascular endothelial cells, smooth muscle cells and macrophages indicating a possible role for the CD40-CD154 immunoregulatory signaling mechanism during inflammation and immunity in atherogenesis (6). Human CD154-muCD8 binds to cell surface expressed human CD40 and this binding is blocked by anti-human CD154 monoclonal antibody.
References: 1) D. Gray, et al, (1994) Seminars in Immunol 6: 303-310. 2) F. Pietravalle, et al, (1996) J Biol Chemistry 271: 5965-5967. 3) R.J. Noelle, (1996) Immunity 4: 415-419. 4) A. Desai-Mehta, et al, (1996) J Clin Invest 97: 2063-2073. 5) I.S. Grewal and R.A. Flavell, (1996) Immunol Today 17: 410-414. 6) F. Mach, et al, (1997) Proc Natl Acad Sci USA 94:1931-1936.

STORAGE CONDITIONS: ***Store at 2 - 5°C***. Freeze/Thawing is not recommended.

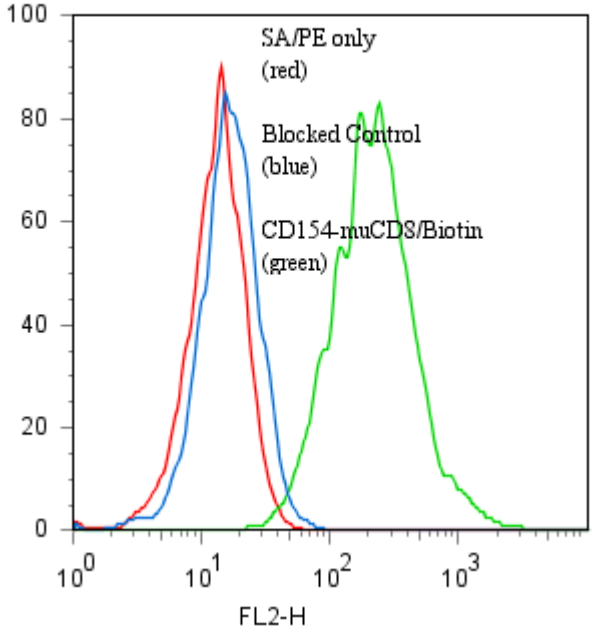
PRODUCT STABILITY: Product should retain activity for at least 6 months after shipping date when stored as recommended. Ship Date:_____

BUFFER: 50 mM Sodium Phosphate pH 7.5, 100 mM Potassium Chloride, 150mM NaCl, 5% Glycerol, 0.2% BSA, 0.04% NaN_3 (as a preservative).

PRODUCTION: Fusion protein from (low FBS containing) tissue culture supernatant of transfectants was purified using affinity and size exclusion chromatography), and reacted with NHS-Biotin. Unconjugated Biotin was removed from conjugate by desalting.

PERFORMANCE: Five x 10^5 cultured human **Raji** cells per tube were washed and incubated 45 minutes on ice with 80 µl of CD154-muCD8/Biotin at a concentration of **10 µg/ml**. Cells were washed twice and incubated with 2° reagent Streptavidin/R-PE (Catalog #253-050), after which they were washed three times, fixed and analyzed by FACS. Cells stained positive with a mean shift of **1.28** $\log_{10}$ fluorescent units when compared to a buffer control at a similar concentration. Binding was blocked when reagent was pre incubated 30 minutes with anti-CD154 antibody (Catalog # 353-020) at a concentration of 100 µg/ml.

Binding of CD154-muCD8/Biotin +SA/PE to human Raji cells



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