

Human CD40 muIg/Biotin*

CATALOG#: 504-030

QUANTITY: 25 ug

CONCENTRATION: 0.5 mg/ml

Molecular Structure: A soluble fusion protein consisting of the extracellular (193aa) domain of human CD40 fused to murine IgG2a Fc (233aa).

Transfectant Cell Line: CHO

INFORMATION: Human CD40 is a member of the tumor necrosis factor (TNF) receptor family and is present on all B cells except plasma cells. CD40 is also found on some epithelial cells, carcinomas and lymphoid dendritic cells. CD40 plays an important role in B cell activation and the interaction with its ligand CD154 (CD40 Ligand) is essential for isotype switching (1). The CD40-CD154 interaction appears to have a role in atherosclerosis and cardiovascular disorders (3,4,5).

CD40-muIg fusion protein binds to cell surface CD154 in Flow cytometry.

REFERENCES: 1) T.A. Foy, et al, (1996) *Annu Rev Immunol* 14: 591-617. 2) M.E. Ozaki, et al, (1997) *J Immunol* 159: 214-221. 3) F. Mach, et al, (1997) *Proc Natl Acad Sci USA* 94:1931-1936. 4) U. Schonbeck, et al, (2000) *PNAS USA* 97: 7458-7463. 5) U. Schonbeck, et al, (2001) *Circulation* 104: 2266-2268.

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

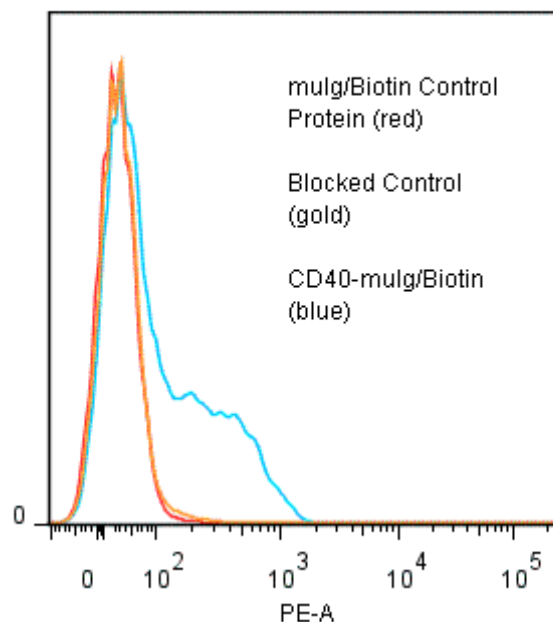
PRODUCT STABILITY: Product should retain activity for at least 6 months after shipping date when stored as recommended. Ship Date: _____

BUFFER: 50 mM Sodium Phosphate pH 7.5, 100 mM Potassium Chloride, 150mM NaCl, 5% Glycerol, 0.2% BSA, 0.04% NaN₃ (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 size exclusion chromatography.

PERFORMANCE: Ficoll prepared human PBMC were stimulated 6 hours in culture in the presence of PMA and Ionomycin. Five x 10⁵ cells per tube were washed and pre incubated 10 minutes with 20 ul of 300 ug/ml human IgG (to reduce non specific binding) after which they were incubated 45 minutes with 80 µl of CD40-muIg/Biotin at a concentration of 10 µg/ml. Cells were washed twice and incubated with 2^o reagent Streptavidin/R-PE (Catalog #253-050), after which they were washed three times, fixed and analyzed by FACS using a lymphoid gate. Cells stained positive with a mean shift of 0.83 log₁₀ fluorescent units when compared to Control protein muIg/Biotin (Cat #581-030). Binding was blocked when cells were pre blocked 10 minutes with 20 µl of anti-CD154 antibody (Catalog #353-020) at a concentration of 0.5 mg/ml.

Binding of CD40-muIg/Biotin +SA/PE to Stimulated human PBL



* *Research Use Only. Not for use in Diagnostic procedures.*