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## Human CD40 muIg/Biotin\*

**CATALOG#:** 504-030

**QUANTITY:** 25 µg

**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% NaN<sub>3</sub> (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 diafiltration.

**PERFORMANCE:** Jurkat-4G cells were stimulated 6 hours in the presence of PMA and Ionomycin (to increase CD154 expression). Five x 10<sup>5</sup> cells per tube were washed and incubated 45 minutes on ice with 80 µl of CD40-muIg/Biotin at a concentration of 5 µg/ml. Cells were washed twice and incubated with 2<sup>o</sup> 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 0.78 log<sub>10</sub> fluorescent units when compared to a buffer control at a similar concentration. 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.

\*This Product is intended for Laboratory Research use only.

**Binding of CD40-muIg/Biotin +SA/PE to human Jurkat-4G cells**

