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Human CD269(BCMA)-muIg Fusion Protein*

CATALOG#: 519-820 (Preservative Free)

QUANTITY: 25 ug

CONCENTRATION: 0.5 mg/ml

Molecular Structure: A soluble molecule consisting of the extracellular (54aa) domain of human BCMA fused to the murine IgG2a Fc (232 aa). Predicted monomeric weight: 33 kd.

Transfectant Cell Line: CHO

INFORMATION: The human B cell activating factor (BAFF) and APRIL(a proliferation inducing ligand) are both type II molecules belonging to the TNF superfamily. They are expressed by non-B cells, and are down regulated by mitogenic stimulation(2). BAFF and APRIL bind to at least two receptors: TACI (transmembrane activator and CAML-interactor) and BCMA (B cell maturation antigen), both of which are restricted to B cells(3,4). Ligation of these receptors with recombinant BAFF dramatically increases IgM production by peripheral blood B cells(1). Recently a third receptor for BAFF (BAFF-R) was described(5). BAFF and BAFFR knockout mice have a reduced numbers of mature B cells in the periphery, however TACI and BCMA knockouts do not share this phenotype, suggesting that BAFF-R may be the primary receptor for BAFF in mice(8,9,10). Cell surface BAFF can be proteolytically cleaved to form a soluble trimeric molecule(2). Levels of soluble BAFF correspond with levels of autoantibodies in Sjogren's Syndrome(11). Recombinant human BCMA-muIg binds to recombinant BAFF-muCD8 and can inhibit binding of this molecule to receptors on Raji cells.

References: 1) Schneider P., J. Tschopp, et al. *J. Exp. Med.* 1999, 189(11):1747-1756. 2) Shu, H.B., H. Johnson, W.H. Hui. *J Leukoc Biol* 1999, 65:680-683. 3) Marsters, S.A., A. Ashkenazi, et al. 2000, *Curr Biol* 10:785-788. 4) Xia, X., H. Hsu, et al. 2000, *J Exp Med*, 192(1): 137-143. 5) Thompson J.S., C. Ambrose, et al. *Science* 2001, 293: 2108-2111. 6) Roschke, V., T.S. Migone, et al. *J Immunol.* 2002, 169: 4314-4321. 7) MacLennan, C.M., C.G. Vinuesa, 2002, *Immunity* 17:235-238. 8) B. Schiemann, et al, (2001) *Science* 293: 2111-2114. 9) S.M. Harless, et al, (2001) *Curr Biol* 11: 1988-1989. 10) *Mol Cell Biol* (2001) 21: 4067-4074. 11) X. Mariette, et al, (2003) *Ann Rheum Dis* 62: 168-171.

STORAGE CONDITIONS: Store at 2 - 5°C. Freeze/Thawing is not recommended. Open under aseptic conditions.

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. Product was sterile filtered and viald under aseptic conditions.

PRODUCTION: Human BCMA-muIg fusion protein was purified from (low FBS containing) tissue culture supernatant of CHO transfectants using Protein A and size exclusion chromatography.

PERFORMANCE: Five x 10⁵ human **Raji** cells were washed and incubated 45 minutes on ice with 80 µl of **BAFF-muCD8** (cat# 525-020) at 5 µg/ml. Cells were washed twice and incubated with 2^o anti-muCD8α/PE Catalog #260-050), after which they were washed three times, fixed and analyzed by FACS. Cells stained positive with a mean shift of **0.71** log₁₀ fluorescent units when compared to a buffer control. **This binding was 100% inhibited when recombinant BAFF was pre incubated 20 minutes with 10 µg/ml BCMA-muIg.**

*Research use only. Not for use in Diagnostic procedures.

BCMA-muIg blocks binding of recombinant BAFF-muCD8 binding with anti-muCD8/PE detection to human Raji cells

