PERFORMANCE DATA SHEET
1819

For maximal recovery of contents please quick spin vial before opening

Human CD257(BAFF)$_{trn}$-muCD8 *Fusion Protein**

CATALOG#: 525-020
QUANTITY: 25 μg **CONCENTRATION: 0.5 mg/ml**

Molecular Structure: A soluble molecule consisting of 159 (c-term) aminoacids of the extracellular domain of human BAFF fused to the extracellular domain (167aa) of murine CD8 alpha, with a predicted monomeric weight of 38.5 kd. The extracellular portion of BAFF was truncated to eliminate a potential protease cleavage site.

Transfectant Cell Line: CHO

INFORMATION: The human B cell activating factor (BAFF,TALL-1, Blys, THANK) and APRIL(a proliferation inducing ligand) are both type II molecules belonging to the TNF superfamily (TNFSFL #13b and 13 respectively). 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 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 BAFF(trn)-muCD8 binds to human cell surface TACI/BCMA/BAFFR.

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 Rhem Dis* 62: 168-171.

STORAGE CONDITIONS: ***Store at 2 - 5^{o}C*. Freeze/Thawing is not recommended**.

Ship Date:_____

BUFFER: 50 mM Sodium Phosphate pH 7.5, 100 mM Potassium Chloride, 150mM NaCl, 0.5 mg/ml Gentamicin Sulfate (as a preservative).

PRODUCTION: Fusion protein from culture supernatant of CHO cell transfectants grown in protein free media was purified using size exclusion and affinity chromatography. Product was 0.1 μm filtered and vialed under aseptic conditions.

PERFORMANCE: Five x 10^5 cultured Raji cells per tube were washed and incubated 45 minutes on ice with 80 μl of BAFF-muCD8 at **5 μg/ml**. Cells were washed twice and incubated with 2^{o} reagent anti-mouse CD8α/R-PE (Catalog #260-050), after which they were washed three times, fixed and analyzed by FACS. Cells stained positive with a mean shift of **1.4** $\log_{10}$ fluorescent units when compared to a buffer/anti- CD8α/R-PE control. BAFF binding was effectively blocked when the reagent was pre incubated with 100 μg/ml BCMA-muIg (catalog #519-020).

This Product is intended for Laboratory Research use only.

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