

PERFORMANCE DATA SHEET

1819

For maximal recovery of contents
please quick spin vial before opening

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

CATALOG#: 525-820 (Preservative Free)

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 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 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 Rheum Dis* 62: 168-171.

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

Ship Date: _____

BUFFER: 50 mM Sodium Phosphate pH 7.5, 100 mM Potassium Chloride, 150mM NaCl.

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 vialled under aseptic conditions.

PERFORMANCE: Five x 10⁵ 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 2⁰ 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 log₁₀ 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.*

Ancell Corporation P.O. Box 87 243 Third Street North Bayport, MN 55003-0087 USA
Phone: Toll free 800-374-9523 or 651-439-0835 Fax: 651-439-1940