Data Sheet (Cat.No.TMPY-00618)

TargetMol

BAFF/TNFSF13B Protein, Canine, Recombinant (hFc)

General Information

Synonyms:	tumor necrosis factor (ligand) superfamily, member 13b
Protein Construction:	A DNA sequence encoding the canine TNFSF13B (NP_001155182.1) (Ala143-Leu292) was expressed with the Fc region of human IgG1 at the N-terminus. Predicted N terminal: Glu
Species:	Canine
Expression Host:	HEK293 Cells
Accession:	C4NZX1
Molecular Weight:	45.5 kDa (predicted)

QC Testing

Biological Activity:	Measured in a cell proliferation assay using mouse splenocytes. The ED50 for this effect is typically 1-5 ng/mL.
Purity:	> 90 % as determined by SDS-PAGE.
Endotoxin:	< 1.0 EU/μg of the protein as determined by the LAL method.
Formulation:	Lyophilized from a solution filtered through a 0.22 μm filter, containing PBS, pH 7.4. Typically, a mixture containing 5% to 8% trehalose, mannitol, and 0.01% Tween 80 is incorporated as a protective agent before lyophilization.

Preparation and Storage

Reconstitution:

A Certificate of Analysis (CoA) containing reconstitution instructions is included with the products. Please refer to the CoA for detailed information.

Stability & Storage:

It is recommended to store recombinant proteins at -20°C to -80°C for future use. Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

Shipping:

In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

Protein Background

B lymphocyte stimulator (BLyS), also known as TNFSF13B, CD257 and BAFF, is a single-pass type II membrane protein, which belongs to the tumor necrosis factor family. BAFF is abundantly expressed in peripheral blood Leukocytes and is specifically expressed in monocytes and macrophages. BAFF is a cytokine and serves as a ligand for receptors TNFRSF13B (TACI), TNFRSF17 (BCMA), and TNFRSF13C (BAFFR). These receptors are a prominent factor in B cell differentiation, homeostasis, and selection. BLyS levels affect survival signals and selective apoptosis of

autoantibody-producing B cells. Thus, it acts as a potent B cell activator and has been shown to play an important role in the proliferation and differentiation of B cells. Overexpression of BLyS in mice can lead to clinical and serological features of systemic lupus erythematosus (SLE) and Sjögren's syndrome (SS). BLyS is an attractive therapeutic target in human rheumatic diseases. The ability of BLyS to regulate both the size and repertoire of the peripheral B cell compartment raises the possibility that BLyS and antagonists thereof may form the basis of a therapeutic trichotomy. As an agonist, BLyS protein may enhance humoral immunity in congenital or acquired immunodeficiencies such as those resulting from viral infection or cancer therapy.Cancer ImmunotherapyImmune CheckpointImmunotherapyTargeted Therapy

Reference

Nardelli B,et al.(2002) B lymphocyte stimulator (BLyS): a therapeutic trichotomy for the treatment of B lymphocyte diseases. Leuk Lymphoma. 43(7): 1367-73.

Stohl W. (2006) Therapeutic targeting of B lymphocyte stimulator (BLyS) in the rheumatic diseases. Endocr Metab Immune Disord Drug Targets. 6(4): 51-8.

Cancro MP,et al.(2009) The role of B lymphocyte stimulator (BLyS) in systemic lupus erythematosus. J Clin Invest. 119(5): 1066-73.