

DESCRIPTION

Source	Mouse myeloma cell line, NS0-derived mouse BTNL10 protein		
	Mouse BTNL10 (Lys30-Glu167) Accession # Q9JK39	IEGRMDP	Mouse IgG _{2a} (Glu98-Lys330)
	N-terminus		C-terminus
N-terminal Sequence Analysis	Lys30		
Structure / Form	Disulfide-linked homodimer		
Predicted Molecular Mass	42.6 kDa		

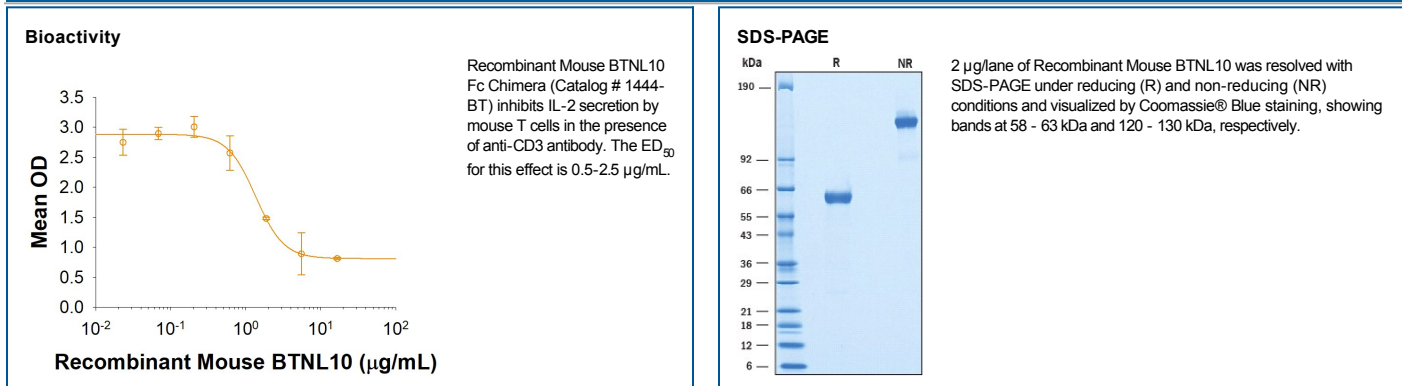
SPECIFICATIONS

SDS-PAGE	58-63 kDa, reducing conditions
Activity	Measured by its ability to inhibit IL-2 secretion by mouse T cells in the presence of anti-CD3. The ED ₅₀ for this effect is 0.5-2.5 µg/mL.
Endotoxin Level	<0.10 EU per 1 µg of the protein by the LAL method.
Purity	>95%, by SDS-PAGE visualized with Silver Staining and quantitative densitometry by Coomassie® Blue Staining.
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS. See Certificate of Analysis for details.

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 200 µg/mL in PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	<ul style="list-style-type: none"> ● 12 months from date of receipt, ≤ -20 °C as supplied. ● 1 month, 2 to 8 °C under sterile conditions after reconstitution. ● 3 months, ≤ -20 °C under sterile conditions after reconstitution.

DATA



BACKGROUND

Butyrophilin-like 10 (BTNL10) is a member of the BTN/MOG Ig-superfamily and functions as a negative regulator of immune cell activation (1). Mouse BTNL10 is a 275 amino acid (aa) type I transmembrane glycoprotein that contains a signal peptide followed by an extracellular domain (ECD), a transmembrane region, and a short cytoplasmic domain. The ECD of mouse BTNL10 features a single IgV and a poorly defined IgC domain. The IgV domain of mouse BTNL10 shares 53% and 52% sequence identity with the equivalent domain in human and rat BTNL10, respectively. Although recently identified, BTNL10 is one of only five butyrophilins conserved between human and mouse (2). While the complete immunological function of BTN/BTNL molecules is only beginning to emerge, they have been shown to be important in immunity by regulating T cell function (2-4). Recent efforts have focused on BTN/BTNL as potential therapeutic targets for a wide range of diseases (2-4). Currently, both the expression pattern and native function of BTNL10 remain unknown. Our data indicate that BTNL10 inhibits the human T cell activation, including IL-2, IFN-γ secretion, and T cell proliferation.

References:

1. Arnett, H.A. *et al.* (2007) *J. Immunol.* **178**:1523.
2. Arnett, H.A. *et al.* (2012) *Immunogenetics.* **64**:781.
3. Abeler-Dörner L. *et al.* (2012) *Trends Immunol.* **33**(1):34.
4. Arnett, H.A. and Viney J.L. (2014) *Nat Rev Immunol.* **14**(8):559.