

## DESCRIPTION

**Source** Mouse myeloma cell line, NS0-derived mouse BTNL2/Butyrophilin-like 2 protein  
Asp27-Ser452, with a C-terminal 6-His tag  
Accession # O70355

**N-terminal Sequence Analysis** Asp27

**Predicted Molecular Mass** 49 kDa

## SPECIFICATIONS

**SDS-PAGE** 54-67 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<sub>50</sub> for this effect is 1-6 µg/mL.

**Endotoxin Level** <0.10 EU per 1 µg of the protein by the LAL method.

**Purity** >95%, by SDS-PAGE with silver staining.

**Formulation** Lyophilized from a 0.2 µm filtered solution in PBS. See Certificate of Analysis for details.

## PREPARATION AND STORAGE

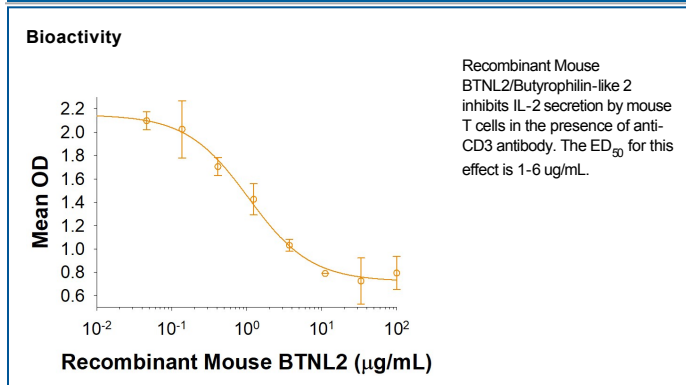
**Reconstitution** Reconstitute at 200 µg/mL in PBS.

**Shipping** The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.

**Stability & Storage** **Use a manual defrost freezer and avoid repeated freeze-thaw cycles.**

- 12 months from date of receipt, -20 to -70 °C as supplied.
- 1 month, 2 to 8 °C under sterile conditions after reconstitution.
- 3 months, -20 to -70 °C under sterile conditions after reconstitution.

## DATA



## BACKGROUND

Butyrophilin-like 2 (BTNL2) is a member of the BTN/MOG Ig-superfamily and functions as a negative regulator of immune cell activation (1). Mouse BTNL2 is a 514 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 (2). The ECD features two V-type Ig-like domains, two C-type Ig-like domains, and four glycosylation sites. The ECD of mouse BTNL2 (aa 27-452) shares 64% and 88% sequence identity with the ECD of human and rat BTNL2, respectively. A splice variant of BTNL2 lacks the second Ig-like domain in the ECD (2). BTNL2 is expressed in epithelial cells of the small intestine, colonic dendritic cells, and in cells of the lymph node (1, 2). BTNL2 expression is upregulated in T cells following activation, a characteristic BTNL2 shares with the homologous B7 family of co-stimulatory molecules (3, 4). BTNL2 negatively regulates T cells by inhibiting proliferation and inflammatory cytokine secretion (1, 3). It also increases the expression of FoxP3 in T cells to promote regulatory T cell development (5). Single nucleotide polymorphisms in BTNL2 are associated with a risk for sporadic prostate cancer, rheumatoid arthritis, sarcoidosis, ulcerative colitis, and other inflammatory diseases (2, 6-12).

## References:

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