

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human BTNL8 in direct ELISA
Source	Monoclonal Mouse IgG _{2A} Clone # 1062005
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Synthetic peptide Fc-cleaved human BTNL8
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied either lyophilized or as a 0.2 µm filtered solution in PBS.

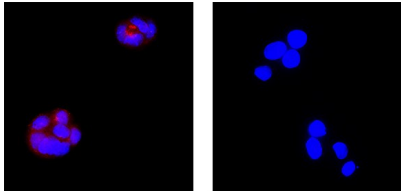
APPLICATIONS

Please Note: Optimal dilutions should be determined by each laboratory for each application. General Protocols are available in the Technical Information section on our website.

	Recommended Concentration	Sample
Immunocytochemistry	8-25 µg/mL	Immersion fixed Caco-2 human colorectal adenocarcinoma cells (positive) and HepG2 human hepatocellular carcinoma cells (negative)

DATA

Immunocytochemistry



Detection of BTNL8 in Caco-2 cells (positive) and HepG2 cells (negative). BTNL8 was detected in immersion fixed Caco-2 human colorectal adenocarcinoma cells (positive) and absent in HepG2 human hepatocellular carcinoma cells (negative) using Mouse Anti-Human BTNL8 Monoclonal Antibody (Catalog # MAB11364) at 8 µg/mL for 3 hours at room temperature. Cells were stained using the NorthernLights™ 557-conjugated Anti-Mouse IgG Secondary Antibody (red; Catalog # NL007) and counterstained with DAPI (blue). Specific staining was localized to cytoplasm. View our protocol for [Fluorescent ICC Staining of Cells on Coverslips](#).

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.5 mg/mL in sterile PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
Stability & Storage	Use a manual defrost freezer and avoid repeated freeze-thaw cycles. <ul style="list-style-type: none"> • 12 months from date of receipt, -20 to -70 °C as supplied. • 1 month, 2 to 8 °C under sterile conditions after reconstitution. • 6 months, -20 to -70 °C under sterile conditions after reconstitution.

BACKGROUND

Butyrophilin-like 8 (BTNL8) is a member of the BTN/MOG Ig-superfamily and functions as a negative regulator of immune cell activation (1). Human BTNL8 is a 500 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 of human BTNL8 shares 88% sequence identity with the ECD of mouse BTNL8. BTNL8 has two alternatively spliced forms: B7-like and BTN-like. Both isoforms of BTNL8 are expressed in a range of human tissues (3). The complete immunological function of BTNL molecules is only beginning to emerge. BTNL8 has been shown to be important in initiation of primary immune responses, suggesting a role in priming of naïve T lymphocytes (3). Down-regulation of BTNL8 mRNA levels has been associated with ulcerative colitis and colon cancer (4). BTNL8 are expressed in colon, lung, testis and neutrophils, and its expression is significantly decreased in ulcerative colitis, colonic tumors as compared to unaffected tissue (4). Soluble BTNL8-Fc fusion protein binds to resting, but not activated T cells. *In vitro*, BTNL8 co-stimulates T cell proliferation and cytokine production. *In vivo* injections of BTNL8-Fc significantly increases production of Ag-specific IgG during the primary but not the secondary immune response (3).

References:

1. Arnett, H.A. *et al.* (2007) *J. Immunol.* **178**:1523.
2. Arnett, H.A. *et al.* (2009) *Cytokine* **46**:370.
3. Chapoval, A.I. *et al.* (2013) *Mol Immunol.* **56**:819.
4. Lebrero-Fernández C. *et al.* (2016) *Immun Inflamm Dis.* **4**:191.