SANTA CRUZ BIOTECHNOLOGY, INC.

BTNL2 (P-13): sc-167241

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Butyrophilin is a glycoprotein that is specifically expressed on the apical surface of mammary epithelial cells during lactation and becomes incorporated as an integral protein into the membrane of the milk fat globule during the budding and secretion of fat droplets into milk. BTNL2 (butyrophilin-like protein 2), also known as BTL-II, is a 455 amino acid single-pass type II membrane protein that acts as a negative regulator of T cell proliferation. Expressed in thymus, brain, kidney, heart, liver, small intestine, testis, ovary, pancreas and leukocytes, BTNL2 exists as at least six alternatively spliced isoforms, which are encoded by a gene located on human chromosome 6. Expression of BTNL2 isoform 3 is associated with susceptibility to sarcoidosis type 2 (SS2), an immune disorder that causes chronic inflammatory granulomatous lesions.

REFERENCES

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2. Ogg, S.L., et al. 1996. Structural organization and mammary-specific expression of the butyrophilin gene. Mamm. Genome 7: 900-905.
3. Stammers, M., et al. 2000. BTL-II: a polymorphic locus with homology to the butyrophilin gene family, located at the border of the major histocompatibility complex class II and class III regions in human and mouse. Immunogenetics 51: 373-382.
4. Cavaletto, M., et al. 2002. A proteomic approach to evaluate the butyrophilin gene family expression in human milk fat globule membrane. Proteomics 2: 850-856.
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6. Valentonyte, R., et al. 2005. Sarcoidosis is associated with a truncating splice site mutation in BTNL2. Nat. Genet. 37: 357-364.
7. Nguyen, T., et al. 2006. BTNL2, a butyrophilin-like molecule that functions to inhibit T cell activation. J. Immunol. 176: 7354-7360.
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CHROMOSOMAL LOCATION

Genetic locus: Btnl2 (mouse) mapping to 17 B1.

SOURCE

BTNL2 (P-13) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an N-terminal extracellular domain of BTNL2 of mouse origin.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-167241 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

BTNL2 (P-13) is recommended for detection of BTNL2 of mouse and rat origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000); non cross-reactive with other BTNL family members.

Suitable for use as control antibody for BTNL2 siRNA (m): sc-141785, BTNL2 shRNA Plasmid (m): sc-141785-SH and BTNL2 shRNA (m) Lentiviral Particles: sc-141785-V.

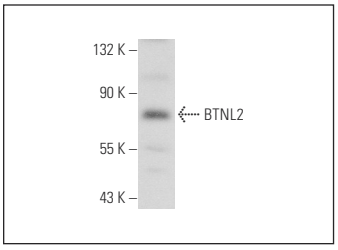
Molecular Weight of BTNL2: 50 kDa.

Positive Controls: mouse brain extract: sc-2253.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



BTNL2 (P-13): sc-167241. Western blot analysis of BTNL2 expression in mouse brain tissue extract.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.