Human BPIFB1 Antibody

Monoclonal Mouse IgG_{2B} Clone # 1023938

Catalog Number: MAB10195

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human BPIFB1 in direct ELISAs.
Source	Monoclonal Mouse IgG_{2B} Clone # 1023938
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Human embryonic kidney cell, HEK293-derived human BPIFB1 Thr22-Gln484 Accession # Q8TDL5
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.

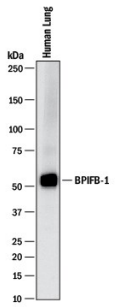
APPLICATIONS

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
Western Blot	2 µg/mL	Human lung tissue

DATA

Western Blot



Detection of Human BPIFB1 by Western Blot. Western blot shows lysates of human lung tisue. PVDF membrane was probed with 2 µg/mL of Mouse Anti-Human BPIFB1 Monoclonal Antibody (Catalog # MAB10195) followed by HRP-conjugated Anti-Mouse IgG Secondary Antibody (Catalog # HAF018). A specific band was detected for BPIFB1 at approximately 54 kDa (as indicated). This experiment was conducted under reducing conditions and using Western Blot Buffer Group 1.

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.** • 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.

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BACKGROUND

BPIFB1 (BPI fold-containing family B member 1), also named LPLUNC1, is a member of the BPI-fold (BPIF) containing/Plunc (palate, lung, and nasal epithelium clone) superfamily of putative innate defense molecules which are predominantly expressed in regions of the oral cavity, nasopharynx and upper respiratory tract (1, 2). BPIF proteins exist as two subgroups, BPIFA (formally SPLUNCs) and BPIFB (formally LPLUNCs) (1, 3). BPIFA proteins have structural homology to the N-terminal domain of BPI whereas BPIFB proteins have structural homology to both domains of BPI (2). Human BPIFB1 cDNA encodes a 484 amino acid (aa) precursor protein with a putative 21 aa signal peptide and a 463 aa mature chain. The mature human BPIFB1 shares approximately 57% and 56% aa sequence identity with mouse and rat BPIFB1, respectively. BPIF proteins appear to exhibit distinct tissue and cell specific expression patterns with various family members, being localized to a number of glandular structures within the upper respiratory tract, nasopharyngeal regions and oral cavity where they are secreted from these tissues and are found in high levels in saliva and nasal and respiratory lining fluids (2). BPIFB1 plays a role in diverse functions, including neutralizing endotoxin (LPS) in septic shock patients, inhibition of endothelial cell growth, dendritic cell maturation, as an anti-angiogenic, chemoattractant or opsonization agent (2). Although less characterized as BPIFA1, BPIFB1 may also function as an innate immune molecule sensing and responding to Gram-negative bacteria (4). BPIFA1 and BPIFB1 expression was increased in late stage chronic obstructive pulmonary disease (COPD) patients, and elevated levels correlate with disease severity (5). BPIFB1 is also upregulated in cystic fibrosis (CF) lung disease and may play a role in the pathogenesis of the disease (6).

References:

1. Bingle, C. D. and C. J. Craven (2002) Hum. Mol. Genet. **11**:937.
2. Alves, D. B. *et al.* (2017) Braz. Oral Res. **31**:e6.
3. Bingle, L. *et al.* (2012) Histochem. Cell Biol. **138**:749.
4. Balakrishnan, A. *et al.* (2013) Innate Immun. **19**:339.
5. De Smet, E. G. *et al.* (2017) Int. J. Chron. Obstruct. Pulmon. Dis. **13**:11.
6. Saferali, A. *et al.* (2015) Am. J. Respir. Cell. Mol. Biol. **53**:607.

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