PRODUCT INFORMATION

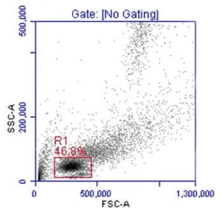
BLT1 Receptor Monoclonal Antibody (Clone 7B1)

Item No. 120111

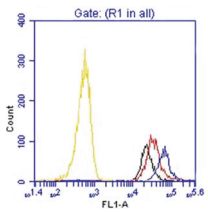
Overview and Properties

Contents: This vial contains 200 µg of protein G-purified monoclonal antibody.
Synonyms: $BLTR_1$, Leukotriene B_4 Receptor 1, LTB_4 Receptor 1
Immunogen: HeLa cells transfected with human BLT_1
Cross Reactivity: (+) BLT_1, (-) BLT_2, $CysLT_1$, and $CysLT_2$ receptors [1]
Species Reactivity: (+) Human
Uniprot No.: Q15722
Form: Liquid
Storage: -20°C (as supplied)
Stability: ≥3 years
Storage Buffer: PBS, pH 7.2, with 50% glycerol, 0.1% BSA, and 0.02% sodium azide
Clone: 7B1
Host: Mouse
Isotype: IgG2a
Applications: Flow cytometry (FC), Immunofluorescense (IF), and Immunohistochemistry (IHC). BLT_1 antagonism at 5 µg/ml with semi-purified receptor preparations; the recommended starting concentration is 5 µg/ml for FC and IHC; the recommended starting dilution is 5 µg/ml for IF. Other applications were not tested, therefore optimal working concentration/dilution should be determined empirically. Does not work for Western blotting.

Images

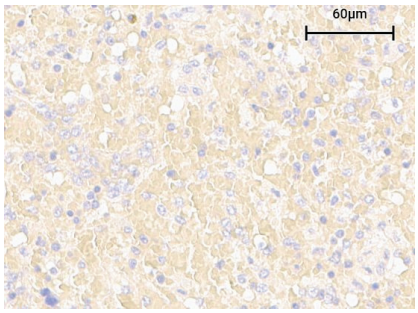


Gate establishment



Yellow: Unlabeled leukocytes
Black: BLT_1 Receptor Monoclonal Antibody (Clone 7B1) (2 µg/ml)
Red: BLT_1 Receptor Monoclonal Antibody (Clone 7B1) (5 µg/ml)
Blue: BLT_1 Receptor Monoclonal Antibody (Clone 7B1) (10 µg/ml)

Whole human blood was fixed with 4% formaldehyde. Erythrocytes were lysed by the addition of 0.1% Triton-X. Cells were blocked with 3% normal goat serum then treated sequentially with primary (BLT_1 Receptor Monoclonal Antibody (Clone 7B1)) and secondary (goat anti-mouse FITC labeled) antibodies with 1 hour, room temperature incubations. The samples were analyzed using an Accuri flow cytometer using the FL1 detector. Color compensation: FL2 by FL1: 5.5.



Immunohistochemistry analysis of formalin-fixed, paraffin-embedded (FFPE) human spleen tissue after heat induced antigen retrieval in pH 6.0 citrate buffer. After incubation with BLT_1 Monoclonal Antibody (Clone 7B1) (Item No. 120111) at a 1:80 dilution, slides were incubated with biotinylated secondary antibody, followed by alkaline phosphatase-streptavidin and chromogen (DAB).

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Description

The human BLT_1 receptor is a G protein-coupled receptor that mediates the proinflammatory effects of leukotriene B_4 (LTB_4).[2] Northern blotting reveals that the BLT_1 receptor is highly expressed in leukocytes, U937 cells, and to a much lower extent in spleen and thymus.[2] Sheep lung membranes have also been identified as a rich source for receptor isolation and purification.[3] A second, low-affinity LTB_4 receptor, BLT_2, has also been cloned and characterized.[4-6] Cayman Chemical's BLT_1 Receptor Monoclonal Antibody is a useful tool for the detection of human BLT1 by flow cytometry, immunofluorescence, and immunohistochemistry. The antibody does not cross react with the other leukotriene receptors (BLT_2, $CysLT_1$, or $CysLT_2$) and does not work for Western blot analysis of BLT_1.

References

1. Pettersson, A., Boketoft, A., Sabirsh, A., *et al.* First-generation monoclonal antibodies identifying the human leukotriene B_4 receptor-1. *Biochem. Biophys. Res. Commun.* **279(2)**, 520-525 (2000).
2. Yokomizo, T., Izumi, T., Chang, K., *et al.* A G-protein-coupled receptor for leukotriene B_4 that mediates chemotaxis. *Nature* **387(6633)**, 620-624 (1997).
3. Votta, B., Keefer, J. and Mong, S. Characterization of the soluble leukotriene B_4 receptor from sheep lung membranes. *Biochem. J.* **270(1)**, 213-218 (1990).
4. Yokomizo, T., Kato, K., Terawaki, K., *et al.* A second leukotriene B_4 receptor, BLT2: A new therapeutic target in inflammation and immunological disorders. *J. Exp. Med.* **193(3)**, 421-431 (2000).
5. Kamohara, M., Takasaki, J., Matsumoto, M., *et al.* Molecular cloning and characterization of another leukotriene B_4 receptor. *J. Biol. Chem.* **275(35)**, 27000-27004 (2000).
6. Wang, S., Gustafson, E., Pang, L., *et al.* A novel hepatointestinal leukotriene B_4 receptor. *J. Biol. Chem.* **275(52)**, 40686-40694 (2000).

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