

CysLT₂ Receptor (B-7): sc-514181

BACKGROUND

Cysteinyl leukotriene (CysLTs) induce intracellular calcium mobilization through the binding of two distinct seven-transmembrane, G protein-coupled receptors, designated CysLT₁ and CysLT₂ Receptors, to induce potent bronchoconstriction. Airway smooth muscle and macrophages express both receptor types, and additionally monocytes and eosinophils express CysLT₁ Receptor, while cardiac Purkinje cells, adrenal medulla, peripheral blood leukocytes and brain also utilize CysLT₂ Receptor. The effects of the CysLT receptors can be blocked by antagonists, indicating a therapeutic mechanism for the treatment of asthma and allergies.

REFERENCES

1. Sarau, H.M., et al. 1999. Identification, molecular cloning, expression, and characterization of a cysteinyl leukotriene receptor. *Mol. Pharmacol.* 56: 657-663.
2. Lynch, K.R., et al. 1999. Characterization of the human cysteinyl leukotriene CysLT₁ Receptor. *Nature* 399: 789-793.
3. Heise, C.E., et al. 2000. Characterization of the human cysteinyl leukotriene 2 receptor. *J. Biol. Chem.* 275: 30531-30536.
4. Sjostrom, M., et al. 2001. Human umbilical vein endothelial cells generate leukotriene C4 via microsomal glutathione S-transferase type 2 and express the CysLT₁ Receptor. *Eur. J. Biochem.* 268: 2578-2586.
5. Maekawa, A., et al. 2001. Identification in mice of two isoforms of the cysteinyl leukotriene 1 receptor that result from alternative splicing. *Proc. Natl. Acad. Sci. USA* 98: 2256-2261.
6. Leff, A.R. 2001. Regulation of leukotrienes in the management of asthma: biology and clinical therapy. *Annu. Rev. Med.* 52: 1-14.

CHROMOSOMAL LOCATION

Genetic locus: CYSLTR2 (human) mapping to 13q14.2; Cysltr2 (mouse) mapping to 14 D3.

SOURCE

CysLT₂ Receptor (B-7) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 213-229 within an N-terminal cytoplasmic domain of CysLT₂ Receptor of mouse origin.

PRODUCT

Each vial contains 200 µg IgM kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-514181 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

STORAGE

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

APPLICATIONS

CysLT₂ Receptor (B-7) is recommended for detection of CysLT₂ Receptor of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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).

Suitable for use as control antibody for CysLT₂ Receptor siRNA (h): sc-43713, CysLT₂ Receptor siRNA (m): sc-142751, CysLT₂ Receptor shRNA Plasmid (h): sc-43713-SH, CysLT₂ Receptor shRNA Plasmid (m): sc-142751-SH, CysLT₂ Receptor shRNA (h) Lentiviral Particles: sc-43713-V and CysLT₂ Receptor shRNA (m) Lentiviral Particles: sc-142751-V.

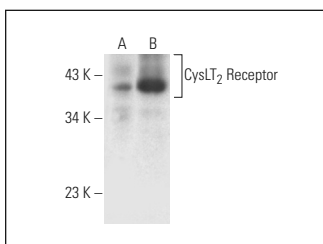
Molecular Weight of CysLT₂ Receptor: 43 kDa.

Positive Controls: PC-12 cell lysate: sc-2250 or mouse thymus extract: sc-2406.

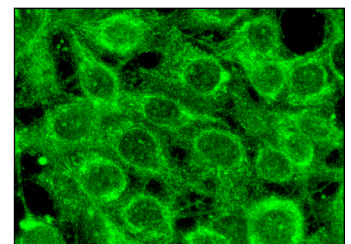
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein L-Agarose: sc-2336 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



CysLT₂ Receptor (B-7): sc-514181. Western blot analysis of CysLT₂ Receptor expression in PC-12 (A) whole cell lysate and mouse thymus tissue extract (B).



CysLT₂ Receptor (B-7): sc-514181. Immunofluorescence staining of methanol-fixed NIH/3T3 cells showing cytoplasmic and membrane localization.

SELECT PRODUCT CITATIONS

1. Wang, F., et al. 2021. A basophil-neuronal axis promotes itch. *Cell* 184: 422-440.e17.

RESEARCH USE

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

PROTOCOLS

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