

CysLT₁ Receptor (H-60): sc-25448

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 broncho-constriction. 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: CYSLTR1 (human) mapping to Xq21.1; Cysltr1 (mouse) mapping to X D.

SOURCE

CysLT₁ Receptor (H-60) is a rabbit polyclonal antibody raised against amino acids 1-60 mapping at the N-terminus of CysLT₁ Receptor of human origin.

PRODUCT

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

STORAGE

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

PROTOCOLS

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

APPLICATIONS

CysLT₁ Receptor (H-60) is recommended for detection of CysLT₁ Receptor of mouse, rat and human 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).

CysLT₁ Receptor (H-60) is also recommended for detection of CysLT₁ Receptor in additional species, including equine and canine.

Suitable for use as control antibody for CysLT₁ Receptor siRNA (h): sc-43712, CysLT₁ Receptor siRNA (m): sc-142750, CysLT₁ Receptor shRNA Plasmid (h): sc-43712-SH, CysLT₁ Receptor shRNA Plasmid (m): sc-142750-SH, CysLT₁ Receptor shRNA (h) Lentiviral Particles: sc-43712-V and CysLT₁ Receptor shRNA (m) Lentiviral Particles: sc-142750-V.

Molecular Weight of CysLT₁ Receptor: 43 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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 goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

SELECT PRODUCT CITATIONS

1. Vannella, K.M., et al. 2007. Cysteinyl leukotrienes are autocrine and paracrine regulators of fibrocyte function. *J. Immunol.* 179: 7883-7890.
2. Steib, C.J., et al. 2010. Treatment with the leukotriene inhibitor montelukast for 10 days attenuates portal hypertension in rat liver cirrhosis. *Hepatology* 51: 2086-2096.
3. Dartt, D.A., et al. 2011. Conjunctival goblet cell secretion stimulated by leukotrienes is reduced by resolvins D1 and E1 to promote resolution of inflammation. *J. Immunol.* 186: 4455-4466.

RESEARCH USE

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