

Product Information



CysLT₂ Receptor (N-Term) Blocking Peptide Catalog No. 320560

The cysteinyl leukotrienes (LTC₄, LTD₄, and LTE₄) contract airway and pulmonary vascular smooth muscle, increase vascular permeability, and stimulate mucus secretion, thereby playing a major role in asthma.¹⁻⁴ LTC₄, LTD₄, and LTE₄ mediate their actions *via* at least 2 receptors designated CysLT₁ and CysLT₂.¹ Cloning of the human CysLT₂ receptor reveals it is a 346 amino acid protein with 38% homology to the human CysLT₁ receptor.⁵⁻⁷ The rank order of binding for leukotrienes to the cloned receptor, as determined using a radioligand binding assay, is LTC₄ = LTD₄ >> LTE₄.⁵ The mRNA for the human CysLT₂ receptor is expressed in lung macrophages, airway smooth muscle, cardiac Purkinje cells, adrenal medulla cells, peripheral blood leukocytes, spleen, placenta, and brain.^{5,6}

Laboratory Procedures

This vial contains 200 µg lyophilized peptide derived from the human CysLT₂ receptor. The CysLT₂ receptor (N-term) blocking peptide (N-terminal amino acids 1-18) can be used in conjunction with Cayman's CysLT₂ receptor (N-term) Polyclonal Antibody (Catalog No. 120560) to block protein-antibody complex formation during immunochemical analysis of CysLT₂ receptor.

Reconstitute the lyophilized peptide with 200 µl of PBS or distilled water. Store this peptide solution at -20°C. It will be stable for at least two years. To block antibody/protein complex formation, the following procedure is recommended:

1. Mix the CysLT₂ receptor (N-term) Polyclonal Antibody (Catalog No. 120560) and blocking peptide together in a 1:1 (v/v) ratio in a microfuge tube. For example, mix 20 µl of antibody and 20 µl of peptide.*
2. Incubate for 1 hour at room temperature with occasional mixing prior to further dilution and application of the mixture to the immunoblot.
3. Dilute the mixture to the final working antibody concentration and apply to the slide or membrane as usual.

*This is a recommended mixture. The minimum amount of peptide needed for complete blocking has not been precisely determined and may vary depending on the sample being analyzed. The amount of peptide required may need to be increased if sufficient blocking does not occur.

References

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2. Dahlén, S.-E., Hansson, G., Hedqvist, P., *et al.* Allergen challenge of lung tissue from asthmatics elicits bronchial contraction that correlates with the release of leukotrienes C₄, D₄, and E₄. *Proc. Natl. Acad. Sci. USA* **80**, 1712-1716 (1983).
3. Busse, W.W. The role of leukotrienes in asthma and allergic rhinitis. *Clin. Exp. Allergy* **26**, 868-879 (1996).
4. Hedqvist, P., Dahlén, S.-E., Gustafsson, L., *et al.* Biological profile of leukotrienes C₄ and D₄. *Acta Physiol. Scand.* **110**, 331-333 (1980).
5. Heise, C.E., O'Dowd, B.F., Figueroa, D.J., *et al.* Characterization of the human cysteinyl leukotriene 2 receptor. *J. Biol. Chem.* **275**, 30531-30536 (2000).
6. Takasaki, J., Kamohara, M., Matsumoto, M., *et al.* The molecular characterization and tissue distribution of the human cysteinyl leukotriene CysLT₂ receptor. *Biochem. Biophys. Res. Commun.* **274**, 316-322 (2000).
7. Lynch, K.R., O'Neill, G.P., Liu, Q., *et al.* Characterization of the human cysteinyl leukotriene CysLT₁ receptor. *Nature* **399**, 789-793 (1999).

Related Product

CysLT₂ Receptor (N-Term) Polyclonal Antibody - Cat. No. 120560

WARNING: THIS PRODUCT IS NOT INTENDED OR APPROVED FOR HUMAN OR VETERINARY USE. USE OF THIS PRODUCT FOR HUMAN OR ANIMAL TESTING IS EXTREMELY HAZARDOUS AND MAY RESULT IN DISEASE, SEVERE INJURY, OR DEATH.

MATERIAL SAFETY DATA

This material should be considered hazardous until information to the contrary becomes available. Do not ingest, swallow, or inhale. Do not get in eyes, on skin, or on clothing. Wash thoroughly after handling. This information contains some, but not all, of the information required for the safe and proper use of this material. Before use, the user must review the complete Material Safety Data Sheet, which has been sent under separate cover to the MSDS supervisor at your institution.

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