

Product Information



EP₄ Receptor (N-Term) Blocking Peptide

Catalog No. 101780

The EP₄ receptor, originally misidentified as an EP₂ receptor, has been cloned from a variety of species including human, mouse, rat, and rabbit.¹⁻⁷ Binding of prostaglandin E₂ (PGE₂) to the EP₄ receptor causes an increase in intracellular cAMP.^{1,2,4,5,7} The receptor has been found in several tissues including kidney, small intestine, thymus, ileum, uterus, and lung. The receptor is also found in peripheral blood mononuclear cells and to a lesser extent in cultured human blood cell lines such as U937 and THP-1 cells.^{1-4,6,7}

Laboratory Procedures

This vial contains 200 µg of lyophilized peptide derived from the human EP₄ receptor sequence.¹⁻³ This peptide was used as an antigen for production of the EP₄ receptor (human) polyclonal antiserum (Catalog No. 101770). This blocking peptide can be used in conjunction with Cayman's EP₄ receptor polyclonal antiserum to block protein-antibody complex formation during immunohistochemical analysis for the EP₄ 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 EP₄ Receptor (human) Polyclonal Antiserum (Catalog No. 101770) 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 antiserum 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

1. An, S., Yang, J., Xia, M., *et al.* Cloning and expression of the EP₂ subtype of human receptors for prostaglandin E₂. *Biochem. Biophys. Res. Commun.* **197**, 263-270 (1993).
2. Bastien, L., Sawyer, N., Grygorczyk, R., *et al.* Cloning, functional expression, and characterization of the human prostaglandin E₂ receptor EP₂ subtype. *J. Biol. Chem.* **269**, 11873-11877 (1994).
3. Mori, K., Tanaka, I., Kotani, M., *et al.* Gene expression of the human prostaglandin E receptor EP₄ subtype: Differential regulation in monocytoid and lymphoid lineage cells by phorbol ester. *J. Mol. Med.* **74**, 333-336 (1996).
4. Honda, A., Sugimoto, Y., Namba, T., *et al.* Cloning and expression of a cDNA for mouse prostaglandin E receptor EP_{2T} subtype. *J. Biol. Chem.* **268**, 7759-7762 (1993).
5. Nishigaki, N., Negishi, M., Honda, A., *et al.* Identification of prostaglandin E receptor 'EP₂' cloned from mastocytoma cells as EP₄ subtype. *FEBS Lett.* **364**, 339-341 (1995).
6. Sando, T., Usui, T., Tanaka, I., *et al.* Molecular cloning and expression of rat prostaglandin E receptor EP₂ subtype. *Biochem. Biophys. Res. Commun.* **200**, 1329-1333 (1994).
7. Breyer, R.M., Davis, L.S., Nian, C., *et al.* Cloning and expression of the rabbit prostaglandin EP₄ receptor. *Am. J. Physiol.* **270**, F485-F493 (1996).

Related Product

EP₄ Receptor (human) Polyclonal Antiserum - Cat. No. 101770

Cayman Chemical

Mailing address
1180 E. Ellsworth Road
Ann Arbor, MI
48108 USA

Phone
(800) 364-9897
(734) 971-3335

Fax
(734) 971-3640

E-Mail
custserv@caymanchem.com

Web
www.caymanchem.com

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.

WARRANTY AND LIMITATION OF REMEDY

Cayman Chemical Company makes **no warranty or guarantee** of any kind, whether written or oral, expressed or implied, including without limitation, any warranty of fitness for a particular purpose, suitability and merchantability, which extends beyond the description of the chemicals hereof. Cayman **warrants only** to the original customer that the material will **meet our specifications at the time of delivery**.

Cayman will carry out its delivery obligations with due care and skill. Thus, in no event will Cayman have **any obligation or liability**, whether in tort (including negligence) or in contract, for any direct, indirect, incidental or consequential damages, even if Cayman is informed about their possible existence.

This limitation of liability does not apply in the case of intentional acts or negligence of Cayman, its directors or its employees. Buyer's **exclusive remedy** and Cayman's sole liability hereunder shall be limited to a **refund** of the purchase price, or at Cayman's option, the **replacement**, at no cost to Buyer, of all material that does not meet our specifications.

Said refund or replacement is conditioned on Buyer giving written notice to Cayman within thirty (30) days after arrival of the material at its destination. Failure of Buyer to give said notice within thirty (30) days shall constitute a waiver by Buyer of all claims hereunder with respect to said material.

For further details, please refer to our **Warranty and Limitation of Remedy** located on our website and in our catalog.

Copyright Cayman Chemical Company, 11/02/2007