

Product Information

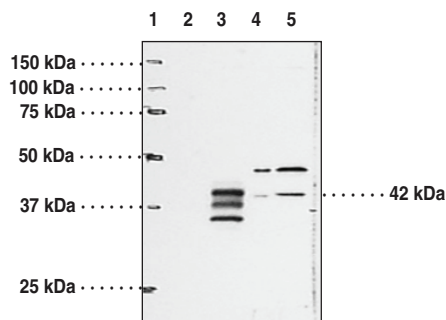


EP₁ Receptor Polyclonal Antibody

Item No. 101740 • Lot No. XXXXX

Synonyms:	PGE ₂ Receptor 1, Prostaglandin E ₂ Receptor 1
Contents:	This vial contains (100-500 µg of peptide affinity-purified IgG, <i>lot specific</i>) in 500 µl TBS, pH 7.4, containing 50% glycerol, 0.5 mg/ml BSA, and 0.02% sodium azide.
Host:	Rabbit
Antigen:	This antibody was raised against a synthetic peptide from the human EP ₁ receptor C-terminal amino acids 380-402 (GLTPSAWEASSLRSSRHSGLSHF). ¹
Cross Reactivity:	(+) Human, mouse, and rat EP ₁ receptor; (-) EP ₂ , EP ₃ , and EP ₄ receptors. Human EP ₁ G L T P S A W E A S S L R S S R H S G L S H F Mouse EP ₁ G L T k S A W E A S S L R S S R H S G f S H I Rat EP ₁ s L T k S A W E A S S L R S S R H S G f S H I
Stability:	≥1 year at -20°C
Applications:	Western blot (WB) and immunocytochemistry; ² recommended dilution for WB is <i>lot specific:lot specific</i> . [NOTE: The EP ₁ receptor appears to be expressed at low levels in many tissues and cell types, potentially making detection by immunochemical techniques difficult.]
Concentration:	Varies by lot, from 0.2-1.0 mg/ml (100-500 µg/vial). Always 100 µl final working volume for western blotting.

The biological effects of PGE₂ are mediated through interaction with four distinct membrane-bound G protein-coupled EP receptors: EP₁, EP₂, EP₃, and EP₄.^{3,4} Binding of PGE₂ to the EP₁ receptor results in an increase in phosphatidyl inositol turnover with subsequent increase in intracellular free Ca²⁺.^{1,5} Pharmacologically, EP₁ receptors mediate contraction of smooth muscle.² The human EP₁ receptor is comprised of 402 amino acids with a molecular mass of approximately 42,000.¹ The EP₁ receptor is expressed in a variety of tissues, including the kidney, lung, and sensory neuron.^{1,5,6} Within the kidney, the EP₁ receptor is expressed at high levels in the cortical, outer medullary, and inner medullary collecting duct.⁷



Lane 1: Precision Plus Standard
Lane 2: CHO-K1 (negative control) cell lysate (50 µg)
Lane 3: EP1 Receptor transfected CHO-K1 cell lysate (50 µg)
Lane 4: HEK-293T cell lysate (50 µg)
Lane 5: COS-7 cell lysate (50 µg)

References

1. Funk, C.D., Furci, L., Fitzgerald, G.A., *et al.* Cloning and expression of a cDNA for the human prostaglandin E receptor EP₁ subtype. *J. Biol. Chem.* **268**, 26767-26772 (1993).
2. Cosme, R., Lublin, D., Takafuji, V., *et al.* Prostanoids in human colonic mucosa: effects of inflammation on PGE₂ receptor expression. *Human Immunology* **61**, 684-696 (2000).
3. Coleman, R.A., Smith, W.L., and Narumiya, S. Classification of prostanoid receptors: Properties, distribution, and structure of the receptors and their subtypes. *Pharmacol. Rev.* **46**, 205-229 (1994).
4. Coleman, R.A., Eglen, R.M., Jones, R.L., *et al.* Classification of prostanoid receptors IUPHAR receptor compendium. *IUPHAR Compendium* 1-12 (1997).
5. Watabe, A., Sugimoto, Y., Honda, A., *et al.* Cloning and expression of cDNA for a mouse EP₁ subtype of prostaglandin E receptor. *J. Biol. Chem.* **268**, 20175-20178 (1993).
6. Southall, M.D. and Vasko, M.R. Prostaglandin receptor subtypes, EP_{3C} and EP₄, mediate the prostaglandin E₂-induced cAMP production and sensitization of sensory neurons. *J. Biol. Chem.* **276**(19), 16083-16091 (2001).
7. Breyer, M.D., Davis, L., Jacobson, H.R., *et al.* Differential localization of prostaglandin E receptor subtypes in human kidney. *Am. J. Physiol.* **270**, F912-F918 (1996).

Related Products

EP₄ Receptor (C-Term) Polyclonal PE Antibody - Item No. 10479 • EP₂ Receptor Polyclonal Antibody - Item No. 101750 • EP₃ Receptor Polyclonal Antibody - Item No. 101760 • EP₄ Receptor (N-term) Polyclonal Antiserum - Item No. 101770 • EP₄ Receptor (C-term) Polyclonal Antiserum - Item No. 101775 • EP₁ Receptor Blocking Peptide - Item No. 301740

WARNING: THIS PRODUCT IS FOR LABORATORY RESEARCH ONLY: NOT FOR ADMINISTRATION TO HUMANS. NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

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 via email to your institution.

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