

# Product Information

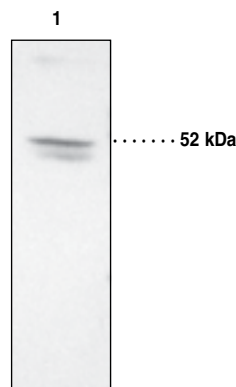


## EP<sub>2</sub> Receptor Polyclonal Antibody

Item No. 101750 • Lot. No. XXXXX

<b>Synonyms:</b>	PGE <sub>2</sub> Receptor 2, Prostaglandin E <sub>2</sub> Receptor 2
<b>Contents:</b>	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
<b>Host:</b>	Rabbit
<b>Antigen:</b>	This antibody was raised against a synthetic peptide from the human EP <sub>2</sub> receptor (C-terminal amino acids 335-358; SLRTQDATQTSCSTQSDASKQADL) conjugated to KLH. <sup>1</sup>
<b>Cross Reactivity:</b>	(+) Human, mouse, and rat EP <sub>2</sub> receptors (other species not tested); (-)EP <sub>1</sub> , EP <sub>3</sub> , and EP <sub>4</sub> receptors. Human EP <sub>2</sub> S L R T Q D A T Q T S C S T Q S D A S K Q A D L Mouse EP <sub>2</sub> S L R T Q e A q Q T S C S T Q S s A S K Q a D L Rat EP <sub>2</sub> S L R t p e A p G a S C S T Q q t d l c g q l
<b>Stability:</b>	≥1 year at -20°C
<b>Applications:</b>	Western blot and immunocytochemistry; recommended dilution <i>lot specific</i> µg/ml ( <i>lot specific:lot specific</i> ). <sup>2,3</sup> [NOTE: The EP <sub>2</sub> receptor appears to be expressed at low levels in many tissues and cell types, potentially making detection by immunochemical techniques difficult.]
<b>Concentration:</b>	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 prostaglandin E<sub>2</sub> (PGE<sub>2</sub>) are mediated through interaction with four distinct membrane-bound G-protein coupled EP receptors: EP<sub>1</sub>, EP<sub>2</sub>, EP<sub>3</sub>, and EP<sub>4</sub>.<sup>4,5</sup> Binding of PGE<sub>2</sub> to the EP<sub>2</sub> receptor results in an increase in adenylate cyclase activity with a subsequent increase in cAMP.<sup>3,6</sup> Pharmacologically, EP<sub>2</sub> receptors mediate relaxation of smooth muscle and are distinguished from EP<sub>4</sub> receptors by their sensitivity to the EP<sub>2</sub> receptor selective agonist butaprost.<sup>3-5</sup> The human EP<sub>2</sub> receptor is comprised of 358 amino acids with a molecular mass of approximately 40,000.<sup>3</sup> A band at 53 kDa is detected in most samples by western blotting. EP<sub>2</sub> is detected on immunoblot at 65 or 52 kDa depending on the degree of post-translational modifications of that receptor. mRNA for the EP<sub>2</sub> receptor is expressed in a variety of tissues including lung, placenta, spleen, intestine, kidney, and sensory neuron.<sup>3,6,7</sup>



Lane 1: Rat sensory neuron (20 µg)

### References

1. Regan, J.W., Bailey, T.J., Pepperl, D.J., et al. *Mol. Pharmacol.* **46**, 213-220 (1994).
2. Cosme, R., Lublin, D., Takafuji, V., et al. *Human Immunology* **61**, 684-696 (2000).
3. Narko, K., Saukkonen, K., Ketola, I., et al. *J. Clin. Endocrinol. Metab.* **86**(4), 1765-1768 (2001).
4. Coleman, R.A., Smith, W.L., and Narumiya, S. *Pharmacol. Rev.* **46**, 205-229 (1994).
5. Coleman, R.A., Eglén, R.M., Jones, R.L., et al. *IUPHAR Compendium* 1-12 (1997).
6. Nemoto, K., Pilbeam, C.C., Bilak, S.R., et al. *Prostaglandins* **54**, 713-725 (1997).
7. Southall, M.D. and Vasko, M.R. *J. Biol. Chem.* **276**, 16083-16091 (2001).

### Related Products

For a list of related products please visit: [www.caymanchem.com/catalog/101750](http://www.caymanchem.com/catalog/101750)

**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.

#### 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, 12/20/2011

### 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](mailto:custserv@caymanchem.com)

#### Web

[www.caymanchem.com](http://www.caymanchem.com)