

# PRODUCT INFORMATION



## EP<sub>4</sub> Receptor (N-Term) Polyclonal Antiserum Item No. 101770

### Overview and Properties

<b>Contents:</b>	This vial contains polyclonal antiserum.
<b>Synonyms:</b>	PGE <sub>2</sub> Receptor 4, Prostaglandin E <sub>2</sub> Receptor 4
<b>Immunogen:</b>	Synthetic peptide corresponding to the N-terminal region of the human EP <sub>4</sub> receptor
<b>Cross Reactivity:</b>	(+) EP <sub>4</sub> receptor
<b>Species Reactivity:</b>	(+) Human, mouse
<b>Uniprot No.:</b>	P35408
<b>Form:</b>	Lyophilized
<b>Storage:</b>	-20°C (as supplied)
<b>Stability:</b>	≥3 years
<b>Storage Buffer:</b>	Polyclonal antiserum when reconstituted in 200 µl of double distilled water
<b>Host:</b>	Rabbit
<b>Applications:</b>	Western blot (WB); the recommended starting dilution is 1:200. Other applications were not tested, therefore optimal working concentration/dilution should be determined empirically.

### Description

Prostaglandin E<sub>2</sub> (PGE<sub>2</sub>) binds to four receptor subtypes: EP<sub>1</sub>, EP<sub>2</sub>, EP<sub>3</sub>, and EP<sub>4</sub>, which are all membrane-bound G protein-coupled receptors (GPCRs).<sup>1-3</sup> The EP<sub>4</sub> receptor was originally thought to be a subtype of the EP<sub>2</sub> receptor but was later found to be a distinct receptor with sequence differences.<sup>4,5</sup> It is expressed in many tissues, including the intestine, heart, kidney, lungs, and brain, and is also expressed in peripheral blood leukocytes and macrophages.<sup>3</sup> The EP<sub>4</sub> receptor is coupled to Gα<sub>s</sub>, and its activation increases intracellular cAMP levels leading to tissue-specific effects. It induces smooth muscle relaxation, angiogenesis, T cell expansion, osteoblast differentiation, and bone resorption and inhibits TNF-α production in monocytes and macrophages, among other activities. *PTGER4*, the gene encoding the EP<sub>4</sub> receptor, is overexpressed in a variety of cancers, and antagonism of the receptor in animal models inhibits tumor growth and angiogenesis.<sup>6</sup> In contrast, EP<sub>4</sub> receptor activation has anti-inflammatory and neuroprotective activities *in vitro* and in animal models.<sup>7,8</sup> Cayman's EP<sub>4</sub> Receptor (N-Term) Polyclonal Antibody can be used for Western blot (WB).

### References

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WARNING  
THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA  
This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

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