Metro Center for High Technology Bldg.
2727 Second Ave. Suite 4113
Detroit, MI 48201
Phone: (313) 961-1606; Fax: (313)963-7130
Email: info@DetroitRandD.com

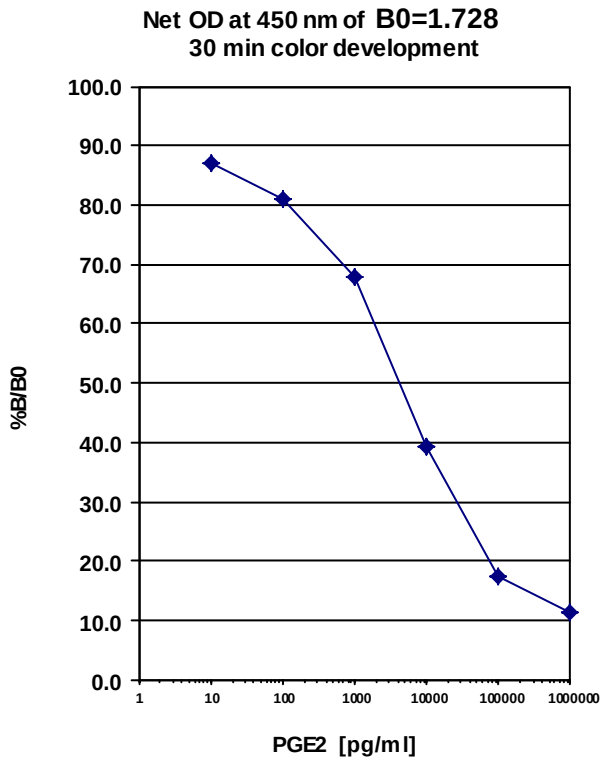
PGE_2 ELISA kit

Cat # PGE1: ELISA kit for measuring PGE_2 in biological samples

This competitive ELISA kit is for determination of PGE_2 (Prostaglandin E_2) levels in biological samples. The specificity of the PGE_2 ELISA was investigated using authentic PGE_2 and fatty acids which, based on their structure, might be anticipated to compete with PGE_2 for binding to antibodies against PGE_2. The anti- PGE_2 antibody showed virtually no cross-reactivity with other tested eicosanoids (see Table 1).

Prostaglandin E2 (PGE_2) is a naturally occurring cyclooxygenase metabolite of the arachidonic acid cascade that mediates many physiological processes[1]. Upon activation of the AA pathway, PGE_2 is synthesized *de novo* and released into the extracellular space where it acts as a regulator of systemic blood pressure due to either vasopressor or vasodepressor effects based on its interaction with four distinct receptors[2]. Prostaglanding H2 is converted to PGE_2 and its formation is an indicator of COX-1 and COX-2 enzyme activity[3]. PGE_2 is also involved in turmorigenesis and inflammation through activation of Wnt and PPARδ signaling pathways[4,5,6] and has been shown to regulate hematopoietic stem and progenitor cell function[7].

Each kit can be used for triplicate analyses of up to 24 samples contains using a 96 well plate format, and contains a vial of PGE_2 standard, a vial of PGE_2 -conjugated horseradish peroxidase (HRP), and buffers for sample and HRP dilutions, and plate washing.



Related Products

Hypertension/Stroke ELISA kits:
-14,15-DHET Hypertension/Stroke ELISA
-11,12-DHET Hypertension/Stroke ELISA
-20-HETE Hypertension/Stroke ELISA

Cancer ELISA Kits:
- NAG-1 (MIC-1, GDF15) Cancer ELISA
- 12-HETE Cancer ELISA
- 15-HETE Cancer ELISA

Oxidative Stress ELISA Kit:
-8-isoprostane ELISA

Hypertension Antibodies:
-Rat: CYP2C23, CYP2C11,

Table1. Specificity of PGE_2 ELISA

Eicosanoids	% Binding of control
PGE_2	100.00
20-hydroxy PGE_2	1.16
11-deoxy PGE_2	<0.01
20-HETE	<0.01
12-HETE	<0.01
15-HETE	<0.01
8-isoprostane	<0.01
14,15-DHET	<0.01
11,12-DHET	<0.01

References

1. Breyer, M. and R. Breyer. Prostaglandin E receptors and the kidney. Am. J. Physiol. Renal Physiol. (2000) 279:F12-F23.

2. Swann, C. E. and R. M. Breyer. Prostaglandin E_2 modulation of blood pressure homeostasis: Studies in rodent models. Prostaglandin & other Lipid Mediators (2011) 96: 10-13

3. Greenhough, A., H. J.M. Smartt, A. E. Moore, H. R. Robertys, A. C. Williams, C. C. Paraqskeva and A. Kaidi. The COX-2/PGE2 pathway: key roles in the hallmarks of cancer and adaptation to the tumour microenvironment. Carcinogenesis (2009) 30: 377-386

4. Chen, E. P. and E.M. Smyth. COX-2 and PGE2 -dependent immunomodulation in breast cancer. Prostaglandin & other Lipid Mediators (2011) 96: 14-20.

5. Greene, E. R., S. Huang, C. N. Serhan and Dipak Panigrahy. Regulation of inflammation in cancer by eicosanoids. Prostaglandin & other Lipid Mediatiors (2011) 96: 27-36.

6. Richiotti, E. and G. A. Fitzgerald. Prostaglandins and inflammation. Arterioscler. Thromb. Vas. Biol. (2011) 31: 986-1000/

7. Pelus, L.M. and J. Hoggatt. Pleiotropic effects of prostaglandin E_2 in hematopoiesis; prostaglandin E_2 and other eicosanoids regulate hematopoietic stem and progenitor cell function. Prostaglandins & other Lipid Mediators(2011) 96: 3-9.