

Product datasheet

Prostaglandin E2 ELISA Kit (Fluorescent) ab136949

1 Image

Overview

Product name Prostaglandin E2 ELISA Kit (Fluorescent)

Detection method Fluorescent

Precision

Intra-assay

Sample	n	Mean	SD	CV%
PGE2	24	24.142pg/ml		= 21%
PGE2	24	16.629pg/ml		= 13%
PGE2	24	5.392pg/ml		= 8.3%

Inter-assay

Sample	n	Mean	SD	CV%
PGE2		24.103pg/ml		= 11.4%
PGE2		15.598pg/ml		= 10.7%
PGE2		6.574pg/ml		= 12.7%

Sample type Cell culture supernatant

Assay type Sandwich (quantitative)

Sensitivity = 684 pg/ml

Range 1562 pg/ml - 100000 pg/ml

Recovery

Sample specific recovery

Sample type	Average %	Range
Spike		95% - 108%

Assay duration Multiple steps standard assay

Product overview Abcam's Fluorescent Prostaglandin E2 (PGE₂) *in vitro* competitive ELISA (Enzyme-Linked

Immunosorbent Assay) kit is designed for the accurate quantitative measurement of Prostaglandin E2 in buffers and culture media.

A solution of PGE2 conjugated to fluorescein is added to uncoated wells containing standards or samples. A solution of monoclonal antibody to PGE2 is then added. This binds PGE2 in a competitive manner. This is a Fluorescence polarization immunoassay (FPIA), where the underlying principle is "fluorescence anisotropy" or "fluorescence polarization". The rate of the rotation of a molecule in motion is indicative of its size. Low amount of analyte results in more antibody molecules bound to the fluorophore probe, read-out: high signal. High amount of analyte results in less antibody molecules bound to the fluorophore probe, read-out: low signal. Hence, the signal is inversely proportional to the concentration of PGE2 in the standards or samples.

The assay should be performed in a black uncoated low-binding microtiter plate (not supplied) and is analyzed using a Fluorescence polarization detector, capable of reading emissions at 520 - 535 nm, with excitation at 485 nm.

Notes

Prostaglandin E2 (PGE2) is formed in a variety of cells from PGH2, which itself is synthesized from arachidonic acid by the enzyme prostaglandin synthetase. PGE2 has been shown to have a number of biological actions, including vasodilation, both anti- and proinflammatory action, modulation of sleep/wake cycles, and facilitation of the replication of human immunodeficiency virus. It elevates cAMP levels, stimulates bone resorption, and has thermoregulatory effects. It has been shown to be a regulator of sodium excretion and renal hemodynamics.

Compound	Cross Reactivity (%)
PGE2	100
PGE1	100
PGD2	11
PGF2 α	2.5
6-keto-PGF1 α	2.3
PGB2	1.8
PGI2	0.9
TXB2	0.3
Arachidonic acid	<0.1
Dihomo- γ -linolenic acid	<0.1

Tested applications

Suitable for: FPIA

Platform

Microplate

Properties

Storage instructions

Please refer to protocols.

Components	1 x 96 tests
Assay Buffer 1 Concentrate	1 x 125ml
PGE2 FPIA Antibody	1 x 8ml
PGE2 FPIA Conjugate Concentrate (fluorescein)	1 x 0.1ml

Components	1 x 96 tests
PGE2 Standard	1 x 0.5ml

Relevance Receptor for prostaglandin E2 (PGE2). The activity of this receptor is mediated by G(s) proteins that stimulate adenylate cyclase. The subsequent raise in intracellular cAMP is responsible for the relaxing effect of this receptor on smooth muscle.

Cellular localization Cell Membrane

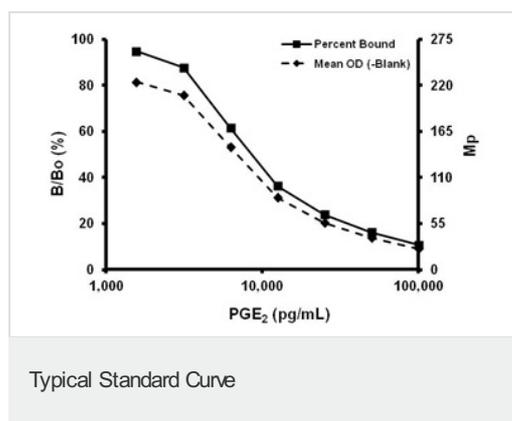
Applications

Our [Abpromise guarantee](#) covers the use of **ab136949** in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
FPIA		Use at an assay dependent concentration.

Images



Representative Standard Curve using ab136949.

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