



Monkey prostaglandin E synthase 2 (PTGES2) ELISA kit- Quantitative competitive

Cat. No.:	0126WXX-1615
Assay Type:	Quantitative competitive ELISA
Target Species:	Monkey
Assay Target:	PTGES2
Size:	48T; 96T

This product is for research use only and is not intended for diagnostic use.

Product Overview

Description

Monkey prostaglandin E synthase 2 (PTGES2) ELISA kit-Quantitative competitive is an ELISA-based *in vitro* research tool designed specifically for the quantitative detection of PTGES2 in monkey samples with a range of 2.5-50 ng/mL and a minimum detectable dose (sensitivity) of 0.1 ng/mL. The kit is highly sensitive and easy to use.

Assay Principle

The PTGES2 ELISA kit utilizes a competitive enzyme immunoassay technique, employing a monoclonal anti-PTGES2 antibody and a PTGES2-HRP conjugate. During the assay, the sample and buffer are incubated with the PTGES2-HRP conjugate in a pre-coated plate for one hour. In this system, PTGES2 from the samples and the PTGES2 - HRP conjugate compete for a limited number of binding sites on the specific antibody. Following the incubation period, the wells are decanted and washed five times to remove unbound materials. An HRP enzyme substrate is then introduced, reacting to form a blue-colored complex. The reaction is halted by the addition of a stop solution, which causes the liquid to turn yellow. The color intensity is measured spectrophotometrically at 450 nm. Because a limited number of antibody sites are available, the resulting color intensity is inversely proportional to the concentration of PTGES2 in the sample. A standard curve is generated by plotting the optical density (O.D.) against the concentration of the standards, allowing the PTGES2 concentration in each sample to be interpolated.

**Background**

PTGES2, an isomerase, catalyzes the conversion of unstable prostaglandin H₂ (PGH₂) into biologically active prostaglandin E₂ (PGE₂). PGE₂ serves as a crucial lipid signaling molecule involved in diverse physiological processes, including inflammation, pain, fever, immune regulation, and metabolism. In obesity research, PTGES2 and its product PGE₂ are closely linked, primarily in the context of adipose tissue inflammation and metabolic dysfunction. As one of the rate-limiting steps in PGE₂ synthesis, PTGES2 represents a potential target connecting obesity-induced inflammatory responses to systemic metabolic imbalance.

Synonyms

C9orf15; Prostaglandin-H(2) E-isomerase; MPGE synthase-2; EC 5.3.99.3; MPGES-2; PGES2; Gamma-interferon-activated transcriptional element-binding factor 1; Membrane-associated prostaglandin E synthase 2; Membrane-associated prostaglandin E synthase-2; Microsomal prostaglandin E synthase-2; Microsomal prostaglandin E synthase 2; Chromosome 9 open reading frame 15; GATE-binding factor 1; GBF-1; GBF1

EC NO.

5.3.99.3

Formula Weight

41,943 Da

Applications

Monkey prostaglandin E synthase 2 (PTGES2) ELISA kit-Quantitative competitive is used to quantify PTGES2 in serum, plasma, cell culture supernatants, body fluid, tissue homogenate of monkey, providing data to support research in a wide range of areas, including inflammation and immunology, metabolism, obesity, and others.

Research Area

Inflammation and Immunology; Metabolism; Obesity

Specification

Sample Type

Serum; Plasma; Cell culture supernatants; Body fluid; Tissue homogenate

Detection Range

2.5-50 ng/mL

Sensitivity

0.1 ng/mL

Cross-reactivity

No significant cross-reactivity or interference was observed.

Recovery

94-103%

Storage

Store at 2-8°C.