**PGE\textsubscript{2} ELISA kit**

ADI-900-001

Highly sensitive PGE\textsubscript{2} ELISA kit for inflammation and eicosanoid research.

**Product Number/Sizes**

<table>
<thead>
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<th>Number</th>
<th>Size</th>
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<td>ADI-900-001</td>
<td>96 wells</td>
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Alternative size available: ADI-901-001 (5x96 wells)

- Highly sensitive measurement, detecting as little as 13.4 pg/ml PGE\textsubscript{2}
- Higher throughput format with results in <3 hrs for up to 37 samples in duplicate
- Widely cited in peer reviewed literature
- Ready-to-use liquid color-coded reagents reduce errors
- Reproducible results day-after-day and lot-after-lot

The PGE\textsubscript{2} EIA kit is a colorimetric competitive enzyme immunoassay kit with results in < 3 hours. Absorbance is read at 405 nm. Screen inhibitors of COX II activity by measuring the levels of downstream PGE\textsubscript{2}. Commercially available since 1992, this kit is widely cited in peer-reviewed publications. The non-radioactive ready-to-use liquid color-coded reagents reduce errors.

**Product Specifications**

**ALTERNATIVE NAME:** Prostaglandin E\textsubscript{2}

**SENSITIVITY:** 13.4 pg/ml (range 39.1 - 2.500 pg/ml)

**ASSAY TIME:** <3 hours

**APPLICATIONS:** ELISA, Colorimetric detection

**APPLICATION NOTES:** For the quantitative determination of PGE\textsubscript{2} in culture supernatants, serum, saliva, urine, and whole blood from any species. Cited sample types include cerebral spinal fluid, dialysate, gingival crevicular fluid, peritoneal exudate fluid and peritoneal exudate cell supernatant, plasma, and tissue.

**SPECIES REACTIVITY:** Species independent

**USE/STABILITY:** Store all components at +4°C, except standard and conjugate at -20°C.

**SHIPPING:** Shipped on Blue Ice

**CONTENTS:** GxM IgG Microtiter plate, Conjugate, Antibody, Assay buffer, Wash buffer concentrate, Standard, pNpp Substrate, Stop solution

**SCIENTIFIC BACKGROUND:** Prostaglandin E\textsubscript{2} (PGE\textsubscript{2}) is an extensively studied prostaglandin owing to its predominance in inflammation, cancer, atherosclerosis, autoimmune disease, and sepsis. Oxidation of arachidonic acid by prostaglandin synthases (COX-1 and COX-2) produces prostaglandin H\textsubscript{2} (PGH\textsubscript{2}), which is further metabolized by PGE synthases into its major product, PGE\textsubscript{2}. PGE\textsubscript{2} mediates autocrine and paracrine signaling by binding to G-protein coupled receptors (EP1, EP2, EP3, EP4) on the cell surface, functioning to modulate phospholipase C and adenylate cyclase activity. PGE\textsubscript{2} has been of great interest as a therapeutic target, either by modulation of its synthesis by COX inhibitors (NSAIDS) or by modulation of its receptors by downregulation or binding antagonists. PGE\textsubscript{2} production in a variety of tissues has been shown to modulate numerous physiological processes including natriuresis in the kidney, smooth muscle elasticity in the vasculature, and the inflammatory response to damaged tissues by monocytes and macrophages.
Product Literature References

An ethanol extract of the rhizome of Atractyloides chinensis exerts anti-gastritis activities and inhibits Akt/NF-κB signaling M.J. Hossen, et al. J. Ethnopharmacol. 228 18 (2018)


Human and feline adipose-derived mesenchymal stem cells have comparable phenotype, immunomodulatory functions, and transcriptome H.C. Clark, et al. Stem Cell Res. Ther. 8 69 (2017)


Mast cell degranulation and calcium influx are inhibited by an Echinacea purpurea extract and the alkylamide dodeca-2E, 4E-dienoic acid isobutyramide T.V. Gulledge, et al. J. Ethnopharmacol. 212 166 (2017)


Effects of Almond- and Olive Oil-Based Docosahexaenoic- and Vitamin E-Enriched Beverage Dietary Supplementation on Inflammation Associated to Exercise and Age X. Capo, et al. Nutrients 8 619 (2016)


MRI-Based Assessment of Intral رسولal Delivery of Bone Marrow-Derived Mesenchymal Stem Cells in a Model of Equine Tendonitis A. Scharf, et al. Stem Cells Int. 2016 1 (2016)


Insight into the molecular mechanism of an herbal injection by integrating network pharmacology and in vitro Y.M. Ma, et al. J. Ethnopharmacol. 173 91 (2015)


Lycopine inhibits lipopolysaccharide-induced INOS and COX-2 up-regulation in RAW264.7 cells through suppressing P38 and STATs activation and increases the survival rate of mice after LPS challenge J. Kang, et al. Int. Immunopharmacol. 12 249 (2012)


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