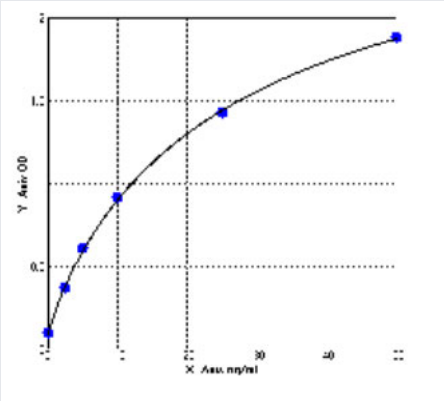
Cyclooxygenase 2 (COX2) ELISA Kit for Human

PRODUCT OVERVIEW

Product Name	Cyclooxygenase 2 (COX2), ELISA Kit
Full Product Name	Human Cyclooxygenase 2 ELISA Kit
Product Gene Name	COX2 elisa kit
Species Reactivity	Human
Assay Type	Quantitative Competitive or Sandwich
Samples	Serum, plasma, cell culture supernatants, body fluid and tissue homogenate
Sensitivity	0.1 ng/mL
Specificity	This assay has high sensitivity and excellent specificity for detection of COX-2. No significant cross-reactivity or interference between COX-2 and analogues was observed. NOTE: Limited by current skills and knowledge, it is impossible for us to complete the cross-reactivity detection between COX-2 and all the analogues, therefore, cross reaction may still exist in some cases.
Preparation and Storage	Store all reagents at 2-8 degree C.
Molecular Weight	68,996 Da
OMIM	600262
Sample Preparation	We suggest pre-experimenting with neat (undiluted) samples, 1:2 or 1:4 dilutions. Please avoid diluting your samples more than 1:10 as it would exceed the dilution limit set for this kit. If the expected concentration of the target is beyond the detection range of the kit, please contact our technical support team
Product Categories/Family for COX2 elisa kit	Cardiovascular
ISO Certification	Manufactured in an ISO 13485:2016 Certified Laboratory.
Related Product Information for COX2 elisa kit	Principle of the Assay: COX-2 ELISA kit applies the quantitative sandwich enzyme immunoassay technique. The microtiter plate has been pre-coated with a monoclonal antibody specific for COX-2. Standards or samples are then added to the microtiter plate wells and COX-2 if present, will bind to the antibody pre-coated wells. In order to quantitatively determine the amount of COX-2 present in the sample, a standardized preparation of horseradish peroxidase (HRP)-conjugated polyclonal antibody, specific for COX-2 are added to each well to "sandwich" the COX-2 immobilized on the plate. The microtiter plate undergoes incubation, and then the wells are thoroughly washed to remove all unbound components. Next, substrate solutions are added to each well. The enzyme (HRP) and substrate are allowed to react over a short incubation period. Only those wells that contain COX-2 and enzyme-conjugated antibody will exhibit a change in color. The enzyme-substrate reaction is terminated by addition of a sulphuric acid solution and the color change is measured spectrophotometrically at a wavelength of 450 nm. A standard curve is plotted relating the intensity of the color (O.D.) to the concentration of standards. The COX-2 concentration in each sample is interpolated from this standard curve. Intended Uses: This COX-2 ELISA kit is a 1.5 hour solid-phase ELISA designed for the quantitative determination of Human COX-2. This ELISA kit for research use only, not for therapeutic or test applications!
Other Notes	Small volumes of COX2 elisa kit vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.

Searchable Terms for COX2 purchase	MBS731300 is a ready-to-use microwell, strip plate ELISA (enzyme-linked immunosorbent assay) Kit for analyzing the presence of the Cyclooxygenase 2 (COX2) ELISA Kit target analytes in biological samples. The concentration gradients of the kit standards or positive controls render a theoretical kit detection range in biological research samples containing COX2. The ELISA analytical biochemical technique of the MBS731300 kit is based on COX2 antibody-COX2 antigen interactions (immunosorbency) and an HRP colorimetric detection system to detect COX2 antigen targets in samples. The ELISA Kit is designed to detect native, not recombinant, COX2. Appropriate sample types may include undiluted body fluids and/or tissue homogenates, secretions. Quality control assays assessing reproducibility identified the intra-assay CV (%) and inter-assay CV(%).



Typical Testing Data/Standard Curve (for reference only) of COX2 elisa kit

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for COX2. It may not necessarily be applicable to this product.

NCBI GI #	181254
NCBI GeneID	5743
NCBI Accession #	AAA58433.1
UniProt Secondary Accession #	Q16876; A8K802
UniProt Related Accession #	P35354
NCBI Official Full Name	cyclooxygenase-2
NCBI Official Synonym Full Names	prostaglandin-endoperoxide synthase 2 (prostaglandin G/H synthase and cyclooxygenase)
NCBI Official Symbol	PTGS2
NCBI Official Synonym Symbols	COX2; COX-2; PHS-2; PGG/HS; PGHS-2; hCox-2; GRIPGHS
UniProt Protein Name	Prostaglandin G/H synthase 2
UniProt Synonym Protein Names	Cyclooxygenase-2; COX-2; PHS II; Prostaglandin H2 synthase 2; PGH synthase 2; PGHS-2; Prostaglandin-endoperoxide synthase 2
Protein Family	Prostaglandin G/H synthase
UniProt Gene Name	PTGS2
UniProt Synonym Gene Names	COX2; COX-2; PGH synthase 2; PGHS-2
UniProt Entry Name	PGH2_HUMAN
NCBI Protein Information	prostaglandin G/H synthase 2; PHS II; PGH synthase 2; cyclooxygenase 2b; prostaglandin H2 synthase 2
NCBI Summary for COX2	Prostaglandin-endoperoxide synthase (PTGS), also known as cyclooxygenase, is the key enzyme in prostaglandin biosynthesis, and acts both as a dioxygenase and as a peroxidase. There are two isozymes of PTGS: a constitutive PTGS1 and an inducible PTGS2, which differ in their regulation of expression and tissue distribution. This gene encodes the inducible isozyme. It is regulated by specific stimulatory events, suggesting that it is responsible for the prostanoid biosynthesis involved in inflammation and mitogenesis. [provided by RefSeq, Feb 2009]

UniProt Comments for COX2	COX-2: Mediates the formation of prostaglandins from arachidonate. May have a role as a major mediator of inflammation and/or a role for prostanoid signaling in activity-dependent plasticity. Homodimer. Belongs to the prostaglandin G/H synthase family. Protein type: Oxidoreductase; Lipid Metabolism - arachidonic acid; EC 1.14.99.1 Chromosomal Location of Human Ortholog: 1q25.2-q25.3 Cellular Component: endoplasmic reticulum membrane; neuron projection; protein complex; cytoplasm; caveola; nucleus Molecular Function: prostaglandin-endoperoxide synthase activity; protein homodimerization activity; peroxidase activity; enzyme binding; arachidonate 15-lipoxygenase activity; metal ion binding; heme binding; lipid binding Biological Process: positive regulation of nitric oxide biosynthetic process; positive regulation of apoptosis; positive regulation of smooth muscle cell proliferation; response to lithium ion; response to glucocorticoid stimulus; positive regulation of NF-kappaB import into nucleus; response to lipopolysaccharide; decidualization; prostaglandin biosynthetic process; sensory perception of pain; negative regulation of synaptic transmission, dopaminergic; positive regulation of synaptic transmission, glutamatergic; response to estradiol stimulus; bone mineralization; negative regulation of cell cycle; negative regulation of cell proliferation; response to vitamin D; lipoxygenase pathway; nicotinamide metabolic process; negative regulation of smooth muscle contraction; regulation of blood pressure; arachidonic acid metabolic process; angiogenesis; positive regulation of smooth muscle contraction; inflammatory response; response to fructose stimulus; water-soluble vitamin metabolic process; positive regulation of prostaglandin biosynthetic process; response to drug; negative regulation of calcium ion transport; vitamin metabolic process; cyclooxygenase pathway; positive regulation of synaptic plasticity; learning; memory; hair cycle; prostaglandin metabolic process; response to manganese ion; ovulation; NAD metabolic process; regulation of inflammatory response; brown fat cell differentiation; positive regulation of fever; positive regulation of vasoconstriction; response to oxidative stress; cell motility; embryo implantation
Research Articles on COX2	**1.** Hydroxytyrosol, at nutritionally relevant concentrations, reduces MMP-9 and COX-2 induction in activated human monocytes via PKCalpha and PKCbeta1 inhibition
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