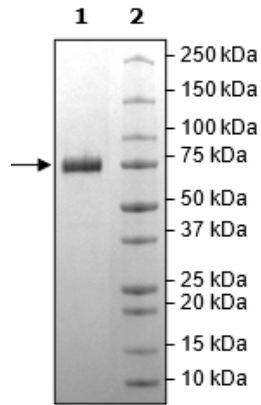


Product Information

Description:	Recombinant human COX-2, full length encompassing amino acids 1-604 (end). This construct contains a C-terminal FLAG followed by an His-tag (6xHis). This protein was affinity purified.
Background:	COX-2, also known as prostaglandin-endoperoxidase synthase 2, PTGS2 or cyclooxygenase-2, is a homodimer involved in inflammation processes. It is involved in the conversion of arachidonic acid (AA) to prostaglandin H (PGH ₂), which can then be converted into prostacyclin, prostaglandins or thromboxane A ₂ . Expression of this enzyme is only found during inflammation. The absence of COX-2 in normal tissues makes it a suitable target for inhibitor-based therapies in inflammation. Inhibitors of COX-2 fall under the NSAID (nonsteroidal anti-inflammatory drugs) class and are used to treat several forms of arthritis and sport injuries. However, it was found that current inhibitors can increase the chance of cardiovascular pathologies, such as heart failure and stroke. Further studies are required to identify the mechanisms involved in this serious side effect and develop new inhibitors.
Species:	Human
Construct:	COX-2 (1-604(end)-FLAG-His)
Concentration:	0.81 mg/ml
Expression System:	Sf9
Purity:	≥90%
Format:	Aqueous buffer solution.
Formulated In:	40 mM Tris-HCl, pH 8.0, 110 mM NaCl, 2.2 mM KCl, 0.04% Tween-20, 20% glycerol, 80 µg/ml FLAG peptide, 300 µM diethyldithiocarbamate, and 0.08% Triton X-100
MW:	71 kDa
Genbank Accession:	NM_000963
Stability:	At least 6 months at -80°C.
Storage:	-80°C
Instructions for Use:	Thaw on ice and gently mix prior to use. DO NOT VORTEX. Perform a quick spin before opening. Aliquot into small volumes and flash freeze for long term storage. Avoid multiple freeze/thaw cycles.
Assay Conditions:	Activity was measured by titrating the enzyme in Assay buffer (100 mM Tris-HCl, pH 8, 3 µM EDTA) with 100 µM Ampliflu™ Red and 50 µM arachidonic acid (Cayman Chemical #90010.1 peroxide free) and measuring fluorescence (λ _{ex} 535; λ _{em} 590) after 5 min. Reaction volume was 100 µl.
Applications:	Useful for the study of enzyme kinetics, screening inhibitors, and selectivity profiling.

Quality Control Data

4-20% SDS-PAGE Coomassie Staining



COX2 Activity

