

Recombinant Human COX-2 Protein

Catalog No.: RP02992 **Recombinant** **1 Publications**

Sequence Information

Species	Gene ID	Swiss Prot
Human	5743	P35354

Tags

C-His

Synonyms

COX-2; COX2; GRIPGHS; hCox-2; PGGHS; PGHS-2; PHS-2

Product Information

Source	Purification
Baculovirus-Insect Cells	>90% as determined by SDS-PAGE

Calculated MW	Observed MW
68.5 kDa	66 kDa

Endotoxin

<1EU/μg

Formulation

Lyophilized from sterile 50mM Tris, 100mM NaCl, 0.5mM PMSF, 10% glycerol, pH 8.0.

Reconstitution

Centrifuge the vial before opening. It is recommended that sterile water (200uL) be added to the vial to prepare a stock solution of 0.25mg/mL. Avoid vortex or vigorously pipetting the protein. For long term storage, it is recommended to add a carrier protein or stabilizer (e.g. 0.1% BSA, 5% HSA, 10% FBS or 5% Trehalose), and aliquot the reconstituted protein solution to minimize free-thaw cycles.

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Background

PTGS2, also known as COX-2, is a component of Prostaglandin-endoperoxide synthase (PTGS). 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. PTGS2 is overexpressed in many cancers. The overexpression of PTGS2 along with increased angiogenesis and GLUT-1 expression is significantly associated with gallbladder carcinomas. Furthermore the product of COX-2, PGH2 is converted by prostaglandin H synthase into PGE2, which in turn can stimulate cancer progression. Consequently inhibiting COX-2 may have benefit in the prevention and treatment of these types of cancer. PTGS2 is regulated by specific stimulatory events, suggesting that it is responsible for the prostanoid biosynthesis involved in inflammation and mitogenesis. It mediates the formation of prostaglandins from arachidonate and may have a role as a major mediator of inflammation and/or a role for prostanoid signaling in activity-dependent plasticity.

Basic Information

Description

Recombinant Human COX-2 Protein is produced by Baculovirus-Insect Cells expression system. The target protein is expressed with sequence (Met 1-Leu 604) of human COX-2 (Accession #NP_000954.1) fused with a polyhistidine tag at the C-terminus.

Bio-Activity

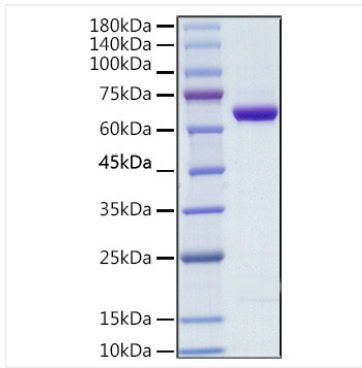
Storage

Store at -20°C. Store the lyophilized protein at -20°C to -80 °C up to 1 year from the date of receipt.

After reconstitution, the protein solution is stable at -20°C for 3 months, at 2-8°C for up to 1 week.

Avoid repeated freeze/thaw cycles.

Validation Data



Recombinant Human COX-2 Protein was determined by SDS-PAGE with Coomassie Blue, showing a band at 66 kDa.