



PTGS2 Recombinant Monoclonal Antibody

Product Code	CSB-RA018986A0HU
Abbreviation	Prostaglandin G/H synthase 2
Storage	Upon receipt, store at -20°C or -80°C. Avoid repeated freeze.
Uniprot No.	P35354
Immunogen	A synthesized peptide derived from human PTGS2
Species Reactivity	Human
Tested Applications	ELISA
Relevance	Converts arachidonate to prostaglandin H2 (PGH2), a committed step in prostanoid synthesis (PubMed:26859324, PubMed:27226593). Constitutively expressed in some tissues in physiological conditions, such as the endothelium, kidney and brain, and in pathological conditions, such as in cancer. PTGS2 is responsible for production of inflammatory prostaglandins. Up-regulation of PTGS2 is also associated with increased cell adhesion, phenotypic changes, resistance to apoptosis and tumor angiogenesis. In cancer cells, PTGS2 is a key step in the production of prostaglandin E2 (PGE2), which plays important roles in modulating motility, proliferation and resistance to apoptosis.
Form	Liquid
Conjugate	Non-conjugated
Storage Buffer	Rabbit IgG in phosphate buffered saline , pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.
Purification Method	Affinity-chromatography
Isotype	Rabbit IgG
Clonality	Monoclonal
Alias	Prostaglandin G/H synthase 2, Cyclooxygenase-2, COX-2, PHS II, Prostaglandin H2 synthase 2, PGH synthase 2, PGHS-2, Prostaglandin-endoperoxide synthase 2, PTGS2, COX2
Immunogen Species	Homo sapiens (Human)
Research Area	Cardiovascular
Gene Names	PTGS2
Clone No.	4A9
Description	The production of the PTGS2 recombinant monoclonal antibody involves the application of DNA recombinant technology and in vitro genetic manipulation. Initially, animals are immunized with a synthesized peptide derived from human PTGS2 to elicit an immune response and isolate B cells. Positive B cells are then carefully selected and subjected to screening and single clone identification. The light and heavy chains of the PTGS2 antibody are



subsequently amplified using PCR and inserted into a plasmid vector. This recombinant vector is then introduced into a host cell line for antibody expression. The PTGS2 recombinant monoclonal antibody is purified from the cell culture supernatant using affinity chromatography. This highly specific antibody is capable of recognizing human PTGS2 protein and is well-suited for ELISA.

The PTGS2 protein, also known as COX-2, is an enzyme that plays a key role in the production of prostaglandins, which are involved in inflammation and pain responses in the body. In cells, the PTGS2 protein is involved in the conversion of arachidonic acid to prostaglandin H₂, which is then converted into various other prostaglandins by downstream enzymes. The PTGS2 protein is induced in response to inflammatory stimuli such as cytokines, growth factors, and stress. In addition to its role in inflammation and pain, the PTGS2 protein has also been implicated in other physiological processes, such as fever, angiogenesis, and tumor growth.