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Datasheet for 100-401-226

Cox-2 Antibody

Overview

Description:	Anti-COX-2 (RABBIT) Antibody - 100-401-226
Item No.:	100-401-226
Size:	100 µL
Applications:	WB
Reactivity:	Human, Mouse, Rat
Host Species:	Rabbit

Product Details

Background:	COX-2, also known as prostaglandin H synthase, was identified less than a decade ago. Its discovery was followed by a period of discovery and drug development to create a “super aspirin” and led to insights into arthritis, Alzheimer's disease, colorectal cancer and regulation of brain and kidney function in search of better treatments for degenerative and inflammatory diseases. Cox-2 is involved in the response of cells to growth factors, tumor promoters, and cytokines that induce its expression. Given its role in synthesizing prostaglandins, Cox-2 is therefore of interest in studying immune response regulation.
Synonyms:	rabbit anti-COX2 antibody, Prostaglandin G/H synthase 2 antibody, Cyclooxygenase-2 antibody, Prostaglandin-endoperoxide synthase 2 antibody, Prostaglandin H2 synthase 2 antibody, PGH synthase 2 antibody, PGHS-2 antibody
Host Species:	Rabbit
Clonality:	Polyclonal
Format:	Antiserum

Target Details

Gene Name:	PTGS2
Reactivity:	Human, Mouse, Rat
Immunogen Type:	Recombinant Protein
Immunogen:	This whole rabbit serum was prepared by repeated immunizations with a fusion protein corresponding to the carboxy-terminus of human Cox-2.

Purity/Specificity:	This antiserum is directed against human Cox-2. Two different isoforms of the enzyme are known, Cox-1 and Cox-2. A BLAST analysis was used to suggest cross-reactivity with Cox-2 in human, mouse and rat based on a homology with the immunizing sequence and should not cross react with Cox-1. Reactivity against homologues from other sources is not known. Reactivity of this antibody with Cox-2 from other species is unknown.

Relevant Links:	• UniProtKB - P35354 • NCBI - NP_000954.1 • GeneID - 5743

Application Details

Tested Applications:	WB
Application Note:	Cox-2 (Cyclooxygenase-2) is an inducible enzyme that is normally absent from cells, however, in response to growth factors, tumor promoters and some cytokines, it undergoes a rapid and transient expression. This antiserum against Human Cox-2 and has been tested for use in immunoblotting. The antibody recognizes Cox-2 at 70kDa in Sf9 cell lines transfected with Cox-2 as well as in WISH cells induced with IL-1b. Reactivity in other immunoassays is unknown.
Assay Dilutions:	All assays should be optimized by the user. Recommended dilutions (if any) may be listed below.
ELISA:	1:10,000 - 1:50,000
IHC:	User Optimized
WB:	1:5,000 - 1:10,000

Formulation

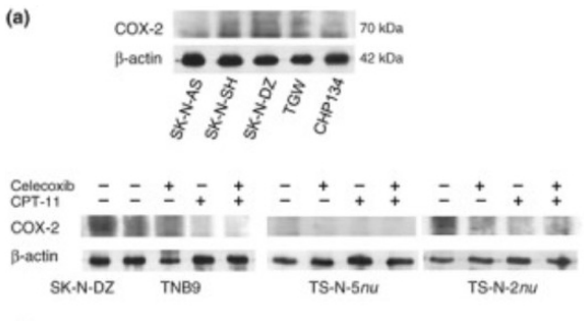
Physical State:	Liquid (sterile filtered)
Concentration:	55 mg/mL by Refractometry
Preservative:	0.01% (w/v) Sodium Azide
Stabilizer:	None

Shipping & Handling

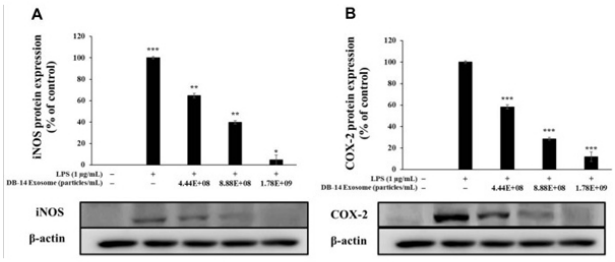
Shipping Condition:	Dry Ice

Storage Condition:	Store vial at -20° C prior to opening. Aliquot contents and freeze at -20° C or below for extended storage. Avoid cycles of freezing and thawing. Centrifuge product if not completely clear after standing at room temperature. This product is stable for several weeks at 4° C as an undiluted liquid. Dilute only prior to immediate use.
Expiration:	Expiration date is one (1) year from date of receipt.

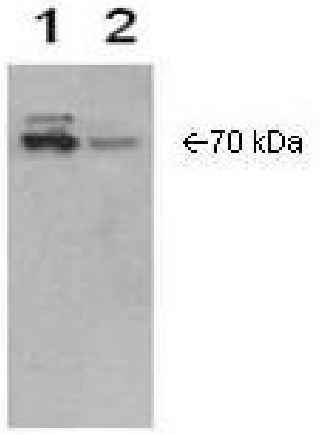
Images



Western Blot
Immunoblot analysis in neuroblastoma (NB) xenografts and NB cell lines. Tumors that had been untreated or treated with drugs once daily for 10 consecutive days for TS-N-2nu and for 7 consecutive days for TNB9 and TS-N-5nu were crushed in liquid nitrogen and lysed in a sample buffer. NB cells were lysed in the sample buffer. Western blot analysis was performed as described in "Materials and Methods". Immunoblotting for β-actin demonstrated equivalent protein loading.
(a) Cyclooxygenase (COX)-2 protein expression in NB cells and NB xenografts. The expression of COX-2 in SK-N-DZ cells was used as a positive control.
Fig 6. PMID: 19673886



Western Blot
Inhibitory effects of DB-14 exosomes on inducible nitric oxide synthase (iNOS) and cyclooxygenase 2 (COX-2) protein expression in LPS-stimulated RAW 264.7 cells.
Inhibitory effect of DB-14 exosome on the protein levels of (A) iNOS and (B) COX-2 in RAW 264.7 cells stimulated with LPS (1 μg/ml) in the presence of DB-14 exosomes (4.44 × 108, 8.88 × 108, 1.78 × 109 particles/ml). Expression of iNOS, COX-2, and β-actin were determined by western blotting. Data represent the means ± standard deviation (SD) with three independent experiments. *p < 0.05; **p < 0.01; ***p < 0.001. Fig. 8. PMID: 39809510



Western Blot
Rockland's anti-Cox2 is shown to detect Cox-2 present in Cox-2 transfected Sf9 cell extract (lane 1) and IL-1ß induced WISH cell extract (lane 2). Detection occurs using a 1:10,000 dilution of antibody followed by 1:10,000 dilution of HRP Goat-a-Rabbit with visualization via ECL. Film exposure approximately 1'. Other detection systems will yield similar results.

References

- Choi BM et al. Inhibition of Melanin Synthesis and Inflammation by Exosomes Derived from Leuconostoc mesenteroides DB-14 Isolated from Camellia japonica Flower. *J Microbiol Biotechnol.* (2025)
- Choi BM et al. Whitening and Anti-Inflammatory Activities of Exosomes Derived from Leuconostoc mesenteroides subsp. DB-21 Strain Isolated from Camellia japonica Flower. *Molecules.* (2025)
- Kaneko M. et al. Prolonged low-dose administration of the cyclooxygenase-2 inhibitor celecoxib enhances the antitumor activity of irinotecan against neuroblastoma xenografts. *Cancer Sci.* (2009)

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