Qty: 100 µg/200 µl

Mouse anti-COX-2

For Research Use Only

Catalog No. 35-8200

Lot No.

Mouse anti-COX-2

FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES.

FORM
This monoclonal antibody is supplied as a 200 µl aliquot at a concentration of 0.5 mg/ml in PBS, pH 7.4, containing 0.1% sodium azide. This antibody is highly purified from mouse ascites by protein A chromatography.

CLONE: COX 229 **ISOTYPE:** Mouse IgG1-k

IMMUNOGEN
Synthetic peptide derived from COX-2.

SPECIFICITY
This antibody reacts specifically with ~70 kDa COX-2 protein.

REACTIVITY
Reactivity has been confirmed by Western blot analysis with stimulated human endothelial cell lysates. The reactivity of this antibody with other species has not been determined.

Sample	ELISA	Immunohistochemistry (paraffin)*	Western Blotting
Human	ND	+++	+++
Immunogen	+++	N/A	N/A

(Excellent +++, Good++, Poor +, No reactivity 0, Not applicable N/A, Not Determined ND)

USAGE
Working concentrations for specific applications should be determined by the investigator. Appropriate concentrations will be affected by several factors, including secondary antibody affinity, antigen concentration, sensitivity of detection method, temperature and length of incubations, etc. The suitability of this antibody for applications other than those listed below has not been determined. The following concentration ranges are recommended starting points for this product.

ELISA: 0.1-1 µg/mL
Western Blotting: 1-3 µg/mL
Immunohistochemistry: 10-20 µg/mL

* For immunohistochemistry with formalin-fixed, paraffin-embedded tissue sections, heat induced epitope retrieval (HIER) with citrate buffer, pH 6.0, is required prior to staining.

STORAGE
Store at 2-8°C for up to one month. Store at –20°C for long-term storage. Avoid repeated freezing and thawing.

(cont'd)

BACKGROUND

Cyclooxygenases 1 and 2 (COX-1, COX-2) are enzymes involved in the conversion of arichidonate to prostaglandins[2]. COX-1 and COX-2 are very similar in structure and function, though they vary in expression. COX-1 is normally expressed in most cell types, whereas COX-2 expression is at low levels unless induced by hormonal stimuli [1,2]. The apparent molecular weight of COX-2 appears to be around 70 kDa[1].

COX-2 is the inducible isoform of cyclooxygenase. COX-2 is upregulated in response to number of mediators, including growth factors, cytokines and endotoxins. COX-2 appears to be expressed in several different types of human cancers, including sporadic coloreactal, breast, pancreatic and cervical cancers[3-6]. COX-2 immunoreactivity is also present in neurons at postsynaptic sites in rat cerebral cortex[7]. Besides its role in carcinogenesis, COX-2 is also involved in apoptosis[8], cellular adhesion[8] as well as angiogenesis[9].

REFERENCES

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3. Chapple KS, et al. *Amer J Pathol* 156(2):545-553, 2000.
4. Spizzo G, et al. *Br J Cancer* 88(4):574-578, 2003.
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6. Ferrandina G, et al. *J Clin Oncol* 20(4):973-981, 2002.
7. Kaufmann WE, et al. *PNAS* 93:2317-2321, 1996.
8. Tsuji M and DuBois RN. *Cell* 83:493-501, 1995
9. Tsuji M, et al. *Cell* 93:705-716, 1998.

RELATED PRODUCTS

Product	*Clone or PAD**	*Cat. No.*
Mouse anti-COX-1	COX 111	35-8100
Rabbit anti-Phosphoserine (PS)	Z-PS1	61-8100
Rabbit anti-Phosphothreonine (PT)	Z-PT1	71-8200
Rabbit anti-Phosphotyrosine (PY)	Z-PY1	61-5800
Mouse anti-Phosphotyrosine (PY-Plus)	(cocktail)	13-6600
PS/PT/PY Sampler Pack		90-0200
Citrate Buffer (pH 6.0)		00-5000
Protein A	Sepharose® 4B	10-1041
rec-Protein G	Sepharose® 4B	10-1241

*PAD: Polyclonal Antibody Designation

Conjugate	ZyMAX™ Goat x Rabbit IgG (H+L)	ZyMAX™ Goat x Mouse IgG (H+L)
Purified	81-6100	81-6500
FITC	81-6111	81-6511
TRITC	81-6114	81-6514
Cy™3	81-6115	81-6515
Cy™5	81-6116	81-6516
HRP	81-6120	81-6520
AP	81-6122	81-6522
Biotin	81-6140	81-6540

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