Revision 1

#13314 Store at +4C

Cox2 (D5H5) XP® Rabbit mAb (PE Conjugate)

Cell Signaling TECHNOLOGY®

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For Research Use Only. Not for Use in Diagnostic Procedures.

Applications:	Reactivity:	Sensitivity:	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
FC-FP	H M R	Endogenous	Rabbit IgG	#P35354	5743

Product Usage Information

Application	Dilution
Flow Cytometry (Fixed/Permeabilized)	1:50

Storage

Supplied in PBS (pH 7.2), less than 0.1% sodium azide and 2 mg/ml BSA. Store at 4°C. Do not aliquot the antibodies. Protect from light. Do not freeze.

Specificity / Sensitivity

Cox2 (D5H5) XP® Rabbit mAb (PE Conjugate) recognizes endogenous levels of total Cox2 protein.

Source / Purification

Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding His108 of human Cox2 protein.

Product Description

This Cell Signaling Technology antibody is conjugated to phycoerythrin (PE) and tested in-house for direct flow cytometry analysis in mouse cells. The antibody is expected to exhibit the same species cross-reactivity as the unconjugated Cox2 (D5H5) XP® Rabbit mAb #12282.

Background

Cyclooxygenase1 (Cox1) and cyclooxygenase2 (Cox2), family members with 60% homology in humans, catalyze prostaglandin production from arachidonic acid (1,2). While Cox1 expression is constitutive in most tissues, Cox2 expression is induced by lipopolysaccharide (LPS) and peptidoglycan (PGN) (3). PGN activates Ras, leading to phosphorylation of Raf at Ser338 and Erk1/2 at Tyr204. The activation of MAP kinase signaling results in subsequent activation of IKKα/β, phosphorylation of IκBα at Ser32/36, and NF-κB activation. Finally, activation of the transcription factor NF-κB is responsible for the induction of Cox2 expression (4). Investigators have shown that LPS and PGN induce the clinical manifestations of arthritis and bacterial infections, such as inflammation, fever, and septic shock (5). Research studies have indicated that Cox1 and Cox2 may also play a role in the neuropathology of Alzheimer's disease by potentiating γ-secretase activity and β-amyloid generation (6).

Background References

1. Xie, W.L. et al. (1991) *Proc Natl Acad Sci USA* 88, 2692-6.
2. Vane, J.R. et al. (1998) *Annu Rev Pharmacol Toxicol* 38, 97-120.
3. O'Neill, G.P. et al. (1994) *Mol Pharmacol* 45, 245-54.
4. Chen, B.C. et al. (2004) *J Biol Chem* 279, 20889-97.
5. Wang, Q. et al. (2001) *Infect Immun* 69, 2270-6.
6. Qin, W. et al. (2003) *J Biol Chem* 278, 50970-7.

Species Reactivity

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

Applications Key

FC-FP: Flow Cytometry (Fixed/Permeabilized)

Cross-Reactivity Key

H: human **M:** mouse **R:** rat **Hm:** hamster **Mk:** monkey **Vir:** virus **Mi:** mink **C:** chicken **Dm:** D. melanogaster **X:** Xenopus **Z:** zebrafish **B:** bovine **Dg:** dog **Pg:** pig **Sc:** S. cerevisiae **Ce:** C. elegans **Hr:** horse **GP:** Guinea Pig **Rab:** rabbit **All:** all species expected

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Limited Uses

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