COX-1 Monoclonal PE Antibody (Clone CX111)
Item No. 160120

Overview and Properties

Contents: This vial contains 100 µg of PE-labeled purified monoclonal antibody.
Synonyms: Cyclooxygenase 1, PGHS-1, Prostaglandin Endoperoxide Synthase 1, Prostaglandin G/H Synthase 1, Prostaglandin H2 Synthase 1
Immunogen: Purified ovine COX-1
Cross Reactivity: (+) Ovine COX-2; (-) Mouse COX-2
Species Reactivity: (+) Human, bovine, mouse, ovine, and rat; (-) Other species not tested
Uniprot No.: P05979
Form: Liquid
Storage: -20°C (as supplied)
Stability: ≥1 year
Storage Buffer: PBS, pH 7.2, with 50% glycerol and 0.02% sodium azide
Clone: CX111
Host: Mouse
Isotype: IgG2b
Applications: Flow Cytometry (FC) and Immunofluorescence (IF); the recommended starting dilution for FC and IF is 1:20. Other applications were not attempted and therefore optimal working dilutions should be determined empirically.

Description

Cyclooxygenase 1 (COX-1) is a bifunctional enzyme that exhibits both COX and peroxidase activities.\(^1,2\) It is composed of an N-terminal signal peptide, an EGF-like domain, a membrane binding domain, a catalytic domain, and a C-terminal tail.\(^3\) COX-1 is constitutively expressed in the gastrointestinal tract, kidney, spleen, liver, and lung and localizes to the endoplasmic reticulum.\(^5,5\) The COX component converts arachidonic acid (Item Nos. 90010 | 90010.1 | 10006607) to a hydroperoxyl endoperoxide prostaglandin G\(_2\) (PGG\(_2\); Item No. 17010) and the peroxidase component reduces the endoperoxide to the corresponding alcohol PGH\(_2\) (Item No. 17020), the precursor of PGs, thromboxanes, and prostacyclins.\(^1,2\) COX-1 is the target of many non-steroidal anti-inflammatory drugs (NSAIDs) and is responsible for the undesirable gastrointestinal and renal side effects, such as ulcer formation and reductions in the glomerular filtration rate, respectively.\(^6,7\) Cayman’s COX-1 Monoclonal PE Antibody (Clone CX111) is composed of an anti-COX-1 monoclonal antibody conjugated to phycoerythrin (PE) and can be used for flow cytometry (FC) and immunofluorescence (IF) applications.

References