Human COX-2 Antibody

Monoclonal Mouse IgG_{2B} Clone # 495222

Catalog Number: MAB4198

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human COX-2 in Western blots.
Source	Monoclonal Mouse IgG_{2B} Clone # 495222
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	*E. coli*-derived recombinant human COX-2 Ala18-Ser112 and Gln386-Leu604 Accession # P35354
Formulation	Lyophilized from a 0.2 μm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied either lyophilized or as a 0.2 μm filtered solution in PBS.

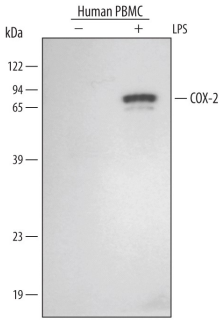
APPLICATIONS

Please Note: *Optimal dilutions should be determined by each laboratory for each application. General Protocols are available in the Technical Information section on our website.*

	Recommended Concentration	Sample
Western Blot	1 µg/mL	See Below
Immunocytochemistry	8-25 µg/mL	See Below
Immunohistochemistry	8-25 µg/mL	See Below

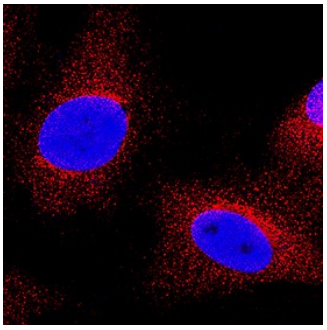
DATA

Western Blot



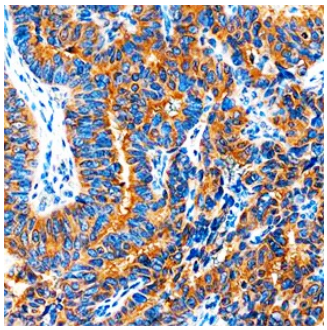
Detection of Human COX-2 by Western Blot. Western blot shows lysates of human peripheral blood mononuclear cells (PBMC) untreated (-) or treated (+) with LPS. PVDF membrane was probed with 1 µg/mL of Mouse Anti-Human COX-2 Monoclonal Antibody (Catalog # MAB4198), followed by HRP-conjugated Anti-Mouse IgG Secondary Antibody (Catalog # HAF007). A specific band was detected for COX-2 at approximately 75 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 2.

Immunocytochemistry



COX-2 in A549 Human Cell Line. COX-2 was detected in immersion fixed A549 human lung carcinoma cell line using Mouse Anti-Human COX-2 Monoclonal Antibody (Catalog # MAB4198) at 8 µg/mL for 3 hours at room temperature. Cells were stained using the NorthernLights™ 557-conjugated Anti-Mouse IgG Secondary Antibody (red; Catalog # NL007) and counterstained with DAPI (blue). Specific staining was localized to cytoplasm. View our protocol for Fluorescent ICC Staining of Cells on Coverslips.

Immunohistochemistry



COX-2 in Human Breast Cancer Tissue. COX-2 was detected in immersion fixed paraffin-embedded sections of human breast cancer tissue using Mouse Anti-Human COX-2 Monoclonal Antibody (Catalog # MAB4198) at 1.7 µg/mL overnight at 4 °C. Tissue was stained using the Anti-Mouse HRP-DAB Cell & Tissue Staining Kit (brown; Catalog # CTS002) and counterstained with hematoxylin (blue). Specific staining was localized to cytoplasm. View our protocol for Chromogenic IHC Staining of Paraffin-embedded Tissue Sections.

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.5 mg/mL in sterile PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
Stability & Storage	**Use a manual defrost freezer and avoid repeated freeze-thaw cycles.** ● 12 months from date of receipt, -20 to -70 °C as supplied. ● 1 month, 2 to 8 °C under sterile conditions after reconstitution. ● 6 months, -20 to -70 °C under sterile conditions after reconstitution.

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BACKGROUND

Cyclooxygenase-2 (COX-2) also known as prostaglandin G/H synthase 2 (PGHS2) is a 70 kDa microsomal enzyme that belongs to the prostaglandin G/H synthase family. It is inducibly-expressed by a number of cell types, including fibroblasts, vascular smooth muscle cells, endothelium, and monocytes. Functionally, COX-2 is a homodimer that catalyzes two steps in the conversion of arachadonic acid to prostaglandin H2. Mature human COX-2 is 587 amino acids (aa) in length and contains one EGF-like domain (aa 18-55), a potential membrane interacting region (aa 277-292) and a globular catalytic domain (aa 293-604). At least one splice form exists that shows an 11 aa substitution for the C-terminal 451 amino acids. Over the amino acid range of the immunogen, human COX-2 shows 83% aa identity to mouse COX-2.

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