Prostaglandin D Synthase (hematopoietic-type; human) Monoclonal Antibody (Clone 2A5)
Item No. 10004345

Overview

Contents: This vial contains 100 μg purified monoclonal antibody.

Synonyms: Hematopoietic-PGDS, H-PGDS, H-PGD Synthase, PGD Synthase (hematopoietic-type)

Immunogen: Recombinant human H-PGDS

Cross Reactivity: (+) H-PGDS

Species Reactivity: (+) Human, mouse; other species not tested

Form: Liquid

Storage: -20°C (as supplied)

Stability: ≥3 years

Storage Buffer: PBS, pH 7.2, with 50% glycerol, 0.5 mg/ml BSA, and 0.02% sodium azide

Clone: 2A5

Host: Mouse

Isotype: IgG2bκ

Applications: Immunohistochemistry (IHC) and Western blot (WB); the recommended starting dilution is 1:200 and 1:1,000. Other applications were not tested, therefore optimal working concentration/dilution should be determined empirically.

Image

Immunohistochemistry analysis of formalin-fixed, paraffin-embedded (FFPE) human lung tissue after heat induced antigen retrieval in pH 6.0 citrate buffer. After incubation with Prostaglandin D Synthase (hematopoietic; human) Monoclonal Antibody (Clone 2A5) (Item No. 10004345) at a 1:200 dilution, slides were incubated with biotinylated secondary antibody, followed by alkaline phosphatase-streptavidin and chromogen (DAB).
Prostaglandin D synthase (PGDS) is a glutathione-dependent enzyme and member of the sigma class of glutathione-S-transferases (GSTs) that catalyzes the conversion of PGH₂ (Item No. 17020) to PGD₂ (Item No. 12010), an eicosanoid that has numerous biological functions, including vasorelaxation, recruitment of inflammatory cells, and inhibition of platelet aggregation.¹⁻³ There are two types of PGDS: lipocalin PGDS (L-PGDS; Item Nos. 10006788 | 10006787) and hematopoietic PGDS (H-PGDS; Item No. 10006593).³ H-PGDS is found in peripheral tissues and immune cells, including Th2 cells, antigen-presenting cells, mast cells, megakaryocytes, and eosinophils, where it is localized to the cytosol.² H-PGDS activity is increased by a variety of stimuli, including LPS, anti-IgE antibodies, phorbol 12-myristate 13-acetate (TPA; Item No. 10008014), ionomycin (Item No. 10004974), and inflammatory cytokines such as IL-13, IL-3, or IL-4.³ siRNA silencing of Hpgds decreases LPS-induced production of PGD₂ in mouse bone marrow-derived macrophages (BMDMs).⁴ Transgenic overexpression of HPGDS in mice increases croton oil-induced ear swelling and PGD₂ production, and genome-wide deletion of Hpgds exacerbates hypotension and vascular permeability in a mouse model of anaphylaxis.⁵,⁶ H-PGDS protein levels are increased in the nasal mucosa of patients with allergic rhinitis, and HPGDS SNPs have been found in individuals with asthma.¹,⁷ Cayman’s Prostaglandin D Synthase (hematopoietic-type; human) Monoclonal Antibody (Clone 2A5) can be used for immunohistochemistry (IHC) and Western blot (WB) applications.

References