

Mouse Anti-PTGDS (Prostaglandin D2 Synthase) [MD428]: MC0667-0.1ML

Intended Use: For Research Use Only

Description: PTGDS (Prostaglandin D2 synthase), also known as lipocalin-type prostaglandin-D synthase (L-PGDS), catalyzes the conversion of prostaglandin H2 (PGH2) to prostaglandin D2 (PGD2). plays a crucial role in the immune system by catalyzing the conversion of prostaglandin H2 to prostaglandin D2, a key mediator involved in various physiological processes, including inflammation and allergic responses. This enzyme is the first member of the sigma class of glutathione S-transferases (GST) in vertebrates and features a unique active site cleft that distinguishes PGD2 synthase from other members of the GST superfamily. In addition, the gene encoding this enzyme in mice was identified as a genetic marker for temperature-sensitive neurons in the preoptic area of anterior hypothalamus (POA). This enzyme is critical for thermoregulation, and when the temperature rises in mouse POA, it generates more PGD2 in temperature-sensitive neurons, reducing core body temperature.

Specifications:

Clone:	MD428
Source:	Mouse
Isotype:	IgG2b/k
Reactivity:	Human
Immunogen:	Recombinant PTGDS expressed in E.coli
Localization:	Cytoplasm, secreted
Formulation:	Purified antibody in PBS pH7.4, containing BSA and $\leq 0.09\%$ sodium azide (NaN ₃)
Storage:	Store at 2°- 8°C
Applications:	IHC, IF, WB
Package:	

Description	Catalog No.	Size
PTGDS (Prostaglandin D2 Synthase) [MD428] Concentrated	MC0667-0.1ML	0.1 ml

IHC Procedure*:

Positive Control Tissue:	Breast cancer, colon cancer, ovarian cancer, spleen
Concentrated Dilution:	50-200
Pretreatment:	Tris EDTA pH9.0, 15 minutes Pressure Cooker or 30-60 minutes water bath at 95°-99°C
Incubation Time and Temp:	30-60 minutes at RT
Detection:	Refer to the detection system manual

* Result should be confirmed by an established diagnostic procedure.

References:

1. Prostaglandin D2 Synthase: A Novel Player in the Pathological Signaling Mechanism of the Aldosterone–Mineralocorticoid Receptor Pathway in the Heart. Ankita Garg, et al. Cells. 22 September 2025. doi.org/10.3390/cells14191485.
2. Biochemical and Structural Characteristics, Gene Regulation, Physiological, Pathological and Clinical Features of Lipocalin-Type Prostaglandin D2 Synthase as a Multifunctional Lipocalin. Yoshihiro Urade, et al. Front. Physiol., 21 October. Volume 12 – 2021. doi.org/10.3389/fphys.2021.718002.
3. Synthesis and biological effects of small molecule enhancers for improved recombinant protein production in plant cell cultures. Bárbara A Rebelo, et al. Bioorg Chem. Jan;94:103452, 2020. doi: 10.1016/j.bioorg.2019.103452.
4. Sample-dependent diagnostic accuracy of prostaglandin D synthase in cerebrospinal fluid leak. Daniel Morell-Garcia et al., Clin Biochem. Jan;50(1-2):27-31, 2017. doi: 10.1016/j.clinbiochem.2016.09.006.

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