# Overview

## Product name
Anti-Prostaglandin D Synthase (Lipocalin)/PDS antibody [EP12357] ab182141

## Description
Rabbit monoclonal [EP12357] to Prostaglandin D Synthase (Lipocalin)/PDS

## Host species
Rabbit

## Tested applications
Suitable for: WB, IHC-P, ICC/IF

## Species reactivity
Reacts with: Mouse, Rat, Human

## Immunogen
Synthetic peptide within Human Prostaglandin D Synthase (Lipocalin)/PDS aa 100 to the C-terminus. The exact sequence is proprietary.

Database link: P41222

(Peptide available as ab188544)

## Positive control
HepG2 whole cell lysate (ab7900); Human fetal brain lysate; Human prostate tissue; HepG2 cells.

## General notes
This product was previously labelled as Prostaglandin D Synthase (Lipocalin)

Our RabMab® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to RabMab® patents.

# Properties

## Form
Liquid

## Storage instructions

## Storage buffer
Preservative: 0.01% Sodium azide

Constituents: 59% PBS, 40% Glycerol, 0.05% BSA

## Purity
Protein A purified

## Clonality
Monoclonal

## Clone number
EP12357

## Isotype
IgG
Function
Catalyzes the conversion of PGH2 to PGD2, a prostaglandin involved in smooth muscle contraction/relaxation and a potent inhibitor of platelet aggregation. Involved in a variety of CNS functions, such as sedation, NREM sleep and PGE2-induced allodynia, and may have an anti-apoptotic role in oligodendrocytes. Binds small non-substrate lipophilic molecules, including biliverdin, bilirubin, retinal, retinoic acid and thyroid hormone, and may act as a scavenger for harmful hydrophobic molecules and as a secretory retinoid and thyroid hormone transporter. Possibly involved in development and maintenance of the blood-brain, blood-retina, blood-aqueous humor and blood-testis barrier. It is likely to play important roles in both maturation and maintenance of the central nervous system and male reproductive system.

Tissue specificity
Abundant in the brain and CNS, where it is expressed in tissues of the blood-brain barrier and secreted into the cerebro-spinal fluid. Abundantly expressed in the heart. In the male reproductive system, it is expressed in the testis, epididymis and prostate, and is secreted into the seminal fluid. Expressed in the eye and secreted into the aqueous humor. Lower levels detected in various tissue fluids such as serum, normal urine, ascitic fluid and tear fluid. Also found in a number of other organs including ovary, fimbriae of the fallopian tubes, kidney, leukocytes.

Sequence similarities
Belongs to the calycin superfamily. Lipocalin family.

Developmental stage
Expression in the amniotic fluid increases dramatically during weeks 12 to 25 of pregnancy. Levels decrease slowly after 25 weeks.

Domain
Forms a beta-barrel structure that accommodates hydrophobic ligands in its interior.

Post-translational modifications
Both N-glycosylation recognition sites are almost quantitatively occupied by N-glycans of the biantennary complex type, with a considerable proportion of structures bearing a bisecting GlcNAc. Agalacto structure as well as sialylated and nonsialylated oligosaccharides bearing alpha2-3- and/or alpha2-6-linked NeuNAc are present.

Cellular localization

Applications
Our Abpromise guarantee covers the use of ab182141 in the following tested applications. The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

<table>
<thead>
<tr>
<th>Application</th>
<th>Abreviews</th>
<th>Notes</th>
</tr>
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<tbody>
<tr>
<td>WB</td>
<td>1/1000. Detects a band of approximately 28 kDa (predicted molecular weight: 21 kDa). Can be blocked with Prostaglandin D Synthase (Lipocalin)/PDS peptide (ab188544).</td>
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<tr>
<td>IHC-P</td>
<td>1/100.</td>
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<tr>
<td>ICC/IF</td>
<td>1/100.</td>
<td></td>
</tr>
</tbody>
</table>

Target

Function
Catalyzes the conversion of PGH2 to PGD2, a prostaglandin involved in smooth muscle contraction/relaxation and a potent inhibitor of platelet aggregation. Involved in a variety of CNS functions, such as sedation, NREM sleep and PGE2-induced allodynia, and may have an anti-apoptotic role in oligodendrocytes. Binds small non-substrate lipophilic molecules, including biliverdin, bilirubin, retinal, retinoic acid and thyroid hormone, and may act as a scavenger for harmful hydrophobic molecules and as a secretory retinoid and thyroid hormone transporter. Possibly involved in development and maintenance of the blood-brain, blood-retina, blood-aqueous humor and blood-testis barrier. It is likely to play important roles in both maturation and maintenance of the central nervous system and male reproductive system.

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Cellular localization
Anti-Prostaglandin D Synthase (Lipocalin)/PDS antibody [EP12357] (ab182141) at 1/1000 dilution + HepG2 cell lysate at 10 µg

**Secondary**
Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugate at 1/1000 dilution

**Predicted band size:** 21 kDa  
**Observed band size:** 28 kDa  
*why is the actual band size different from the predicted?*

Anti-Prostaglandin D Synthase (Lipocalin)/PDS antibody [EP12357] (ab182141) at 1/1000 dilution + Human fetal brain lysate at 20 µg

**Secondary**
Goat Anti-Rabbit IgG H&L (HRP) (ab136636) at 1/500 dilution

**Predicted band size:** 21 kDa  
**Observed band size:** 28 kDa  *why is the actual band size different from the predicted?*

Immunofluorescent analysis of 4% paraformaldehyde-fixed HepG2 cells labeling Prostaglandin D Synthase (Lipocalin)/PDS with ab182141 at 1/100 dilution, followed by Goat anti rabbit IgG (Alexa Fluor®488) secondary antibody at 1/200 dilution. Counterstained with DAPI.
Immunohistochemical analysis of paraffin-embedded Human prostate tissue labeling Prostaglandin D Synthase (Lipocalin)/PDS with ab182141 at 1/100 dilution, followed by prediluted HRP Polymer for Rabbit IgG. Counterstained with Hematoxylin.

Please note: All products are “FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES”

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