

# Recombinant Rat PGDH Protein

**For Research Use Only**

## 1. Basic Product Information

Catalog No.: REP52196

Size: 10ug, 100ug

Protein Name: 15-hydroxyprostaglandin dehydrogenase [NAD(+)] (15-PGDH) (EC 1.1.1.141) (Eicosanoid/docosanoid dehydrogenase [NAD(+)] (EC 1.1.1.-, EC 1.1.1.232) (Prostaglandin dehydrogenase 1)

Synonym: Hpgd, Pgdh1

UniProt ID: O08699

UniProt Link: [www.uniprot.org/uniprotkb/O08699/entry](http://www.uniprot.org/uniprotkb/O08699/entry)

Species Source: Rat

Expression System: HEK293T eukaryotic cell expression system Sequence

Length: 266 AA

Molecular Weight: 29 KD

Protein Tag: C-terminal His6

## 2. Amino Acid Sequence

MHVNGKVALVTGAAQGIGKAFTEALLLHGAKVALVDWNLETGVKCKAALDEQFEPQKTLFIQCDVAD  
QKQLRDTFRKVVDHFGRLDILVNNAGVNNEKNWEQTLQINLVSVISGTYLGLDYMSKQNGGEGGIIIN  
ISSIAGLMPVAQQPVYCASKHGIIGFTRSAAMAANLMKSGVRLNVICPGFVKTPILESIEKEENMGQYI  
EYTDQIKAMMKFYGILDPSAIANGLINLIEDDALNGAIMKITASKGIHFQDYDLFPSFSKAP

## 3. Buffer Composition

Liquid format: PBS-based buffer containing 50% glycerol. Glycerol concentration can be customized upon customer request; please state special requirements when placing your order.

Lyophilized format: Buffer before lyophilization is PBS supplemented with 6% trehalose.

## 4. Storage Conditions

Upon receipt, store the product at -20 °C or -80 °C. Aliquot the product for on-demand use to preserve protein activity and prevent denaturation and inactivation caused by repeated freeze-thaw cycles.

## 5. Product Description

This product is recombinant 15-hydroxyprostaglandin dehydrogenase [NAD(+)] (15-PGDH) (EC 1.1.1.141) (Eicosanoid/docosanoid dehydrogenase [NAD(+)] (EC 1.1.1.-, EC 1.1.1.232) (Prostaglandin dehydrogenase 1) produced using the HEK293T eukaryotic cell expression system. It is suitable for in-vitro functional assays, protein-protein interaction studies, antibody preparation and other biomedical research applications.

**Protein Function:** Catalyzes the NAD-dependent dehydrogenation (oxidation) of a broad array of hydroxylated polyunsaturated fatty acids (mainly eicosanoids and docosanoids, including prostaglandins, lipoxins and resolvins), yielding their corresponding keto (oxo) metabolites (By similarity) (PubMed:9099857). Decreases the levels of the pro-proliferative prostaglandins such as prostaglandin E2 (whose activity is increased in cancer because of an increase in the expression of cyclooxygenase 2) and generates oxo-fatty acid products that can profoundly influence cell function by abrogating pro-inflammatory cytokine expression. Converts resolvins E1, D1 and D2 to their oxo products, which represents a mode of resolvins inactivation. Resolvin E1 plays important roles during the resolution phase of acute inflammation, while resolvins D1 and D2 have a unique role in obesity-induced adipose inflammation (By similarity).

**Subcellular Localization:** Cytoplasm .

## 6. Notes

- Avoid repeated freeze-thaw cycles to maintain protein stability and biological activity.
- Please specify special buffer-composition requirements at the time of order placement.
- For research use only. Not intended for clinical diagnosis, therapeutic use or commercial manufacturing.