Data Sheet (Cat.No.TMPY-02273)

TargetMol

15-PGDH Protein, Mouse, Recombinant (His)

General Information

Synonyms:	15-PGDH;AV026552;hydroxyprostaglandin dehydrogenase 15-(NAD)
Protein Construction:	A DNA sequence encoding the mouse HPGD (Q8VCC1) (Met 1-Ser 269) was expressed, with a polyhistide tag at the C-terusmin. Predicted N terminal: Met 1
Species:	Mouse
Expression Host:	E. coli
Accession:	Q8VCC1
Molecular Weight:	30.6 kDa (predicted); 30 kDa (reducing conditions)

QC Testing

Biological Activity:	Activity testing is in progress. It is theoretically active, but we cannot guarantee it. If you require protein activity, we recommend choosing the eukaryotic expression version first.
Purity:	> 90 % as determined by SDS-PAGE
Endotoxin:	Please contact us for more information.
Formulation:	Supplied as sterile PBS, pH 8.0, 20% glycerol.

Preparation and Storage

Reconstitution:

A Certificate of Analysis (CoA) containing reconstitution instructions is included with the products. Please refer to the CoA for detailed information.

Stability & Storage:

It is recommended to store the product under sterile conditions at -20°C to -80°C. Samples are stable for up to 12 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

Shipping:

Proteins are shipped with blue ice.

Protein Background

15-hydroxyprostaglandin dehydrogenase [NAD+], also known as Prostaglandin dehydrogenase 1, HPGD, and PGDH1, is a member of the short-chain dehydrogenases/reductases (SDR) family. Prostaglandins (PGs) play a key role in the onset of labor in many species and regulate uterine contractility and cervical dilatation. Therefore, the regulation of prostaglandin output by PG synthesizing and metabolizing enzymes in the human myometrium may determine uterine activity patterns in human labor both at preterm and at term. Prostaglandin dehydrogenase (PGDH) metabolizes prostaglandins (PGs) to render them inactive. HPGD is down-regulated by cortisol, dexamethasone, and betamethasone and down-regulated in colon cancer. It is up-regulated by TGFB1. HPGD contributes to the regulation of events that are under the control of prostaglandin levels. HPGD catalyzes the NAD-

dependent dehydrogenation of lipoxin A4 to form 15-oxo-lipoxin A4. and inhibits in vivo proliferation of colon cancer cells. Defects in HPGD are the cause of primary hypertrophic osteoarthropathy autosomal recessive (PHOAR), cranio-osteoarthropathy (COA), and isolated congenital nail clubbing.

Reference

Patel, FA. et al., 2003, J. Clin. Endocrinol. Metab. 88: 2922-33.
McKeown KJ, et al.,2003, J. Clin. Endocrinol. Metab. 88 (4): 1737-41.
Yan, M. et al., 2004, Proc. Natl. Acad. Sci. USA. 101: 17468-73.
Tariq, M. et al., 2009, J Med Genet. 46 (1): 14-20.

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