

Cytokines

Human Recombinant 15-PGDH

15-Hydroxyprostaglandin dehydrogenase, His tag

Catalog #100-1329

50 µg



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Product Description

15-Hydroxyprostaglandin dehydrogenase (15-PGDH) belongs to the short-chain dehydrogenases/reductases (SDR) family and plays an important role in metabolism of prostaglandins. The primary structure of 15-PGDH indicates 20% homology with other SDRs, with some conserved amino acid residues (Krook et al.). It contains a His-residue tag at the carboxyl end of the polypeptide chain. 15-PGDH catalyzes the reversible oxidation of the 15-hydroxyl group in prostaglandins, resulting in inactivated metabolites (Ensor and Tai). It can act on a variety of prostaglandins as substrates in a NAD⁺ dependent manner (Cho et al.). As prostaglandins can have a range of effects on cellular processes, 15-PGDH is of considerable importance in drug development. In vitro and in vivo studies suggest 15-PGDH has tumor suppressive activity and is downregulated in different cancers (Na et al.).

Product Information

Alternative Names:	PGDH, PGDH1, PHOAR1, SDR36C1
Accession Number:	NP_000851.2 (Met1-Gln266) was expressed with a polyhistidine tag at the C-terminus.
Amino Acid Sequence:	MHVNGKVALV TGAAQGIGRA FAEALLKGA KVALVDWNLE AGVQCKAALD EQFEPQKTLF IQCDVADQQQ LRDTRKVVVD HFGRLDILVN NAGVNNNEKNW ERTLQINLVS VISGTYLGLD YMSKQNGGEG GIIINMSSLA GLMPVAQQPV YCASKHGIVG FTRSAALAN LMNSGVRLNA ICPGFVNTAI LESIEKEENM GQYIEYKDHI KDMIKYYGIL DPPLIANGLI TLIEDDALNG AIMKITTSKG IHFQDYDTTP FQAKTQH HHHH HH
Predicted Molecular Mass:	29.7 kDa
Species:	Human
Formulation:	Lyophilized from sterile 50 mM Tris, 100 mM NaCl, 0.5 mM DTT, 10% glycerol, pH 7.5.
Source:	<i>E. coli</i>

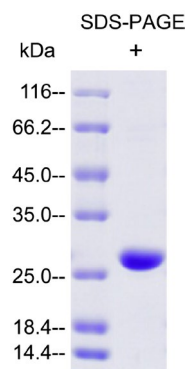
Specifications

Activity:	Not available
Purity:	≥ 89%
Endotoxin Level:	Not available

Preparation and Storage

Storage:	Store at -20 to -80°C.
Stability:	Stable as supplied for 12 months from date of receipt.
Preparation:	Centrifuge vial before opening. Reconstitute the product in sterile water to at least 0.25 mg/mL by pipetting the solution down the sides of the vial. Do not vortex. As a general guide, do not store at 2 - 8°C for more than 1 month or at -80°C for more than 3 months. Avoid repeated freeze-thaw cycles.

Data



Human Recombinant 15-PGDH was resolved with SDS-PAGE under reducing (+) conditions and visualized by Coomassie Blue staining. Human Recombinant 15-PGDH has a predicted molecular mass of 29.7 kDa.

Related Products

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References

- Cho H et al. (2003) Critical residues for the coenzyme specificity of NAD⁺-dependent 15-hydroxyprostaglandin dehydrogenase. *Arch Biochem Biophys* 419(2): 139–46.
- Ensor CM & Tai HH. (1995) 15-Hydroxyprostaglandin dehydrogenase. *J Lipid Mediat Cell Signal* 12(2–3): 313–9.
- Krook M et al. (1990) Purification and structural characterization of placental NAD(+)–linked 15-hydroxyprostaglandin dehydrogenase. The primary structure reveals the enzyme to belong to the short-chain alcohol dehydrogenase family. *Biochemistry* 29(3): 738–43.
- Na HK et al. (2011) 15-Hydroxyprostaglandin dehydrogenase as a novel molecular target for cancer chemoprevention and therapy. *Biochem Pharmacol* 82(10): 1352–60.

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