Recombinant PGDH protein (His tag)

Catalog Number	537552
Synonyms	+; 15-PGDH; Eicosanoid/docosanoid dehydrogenase [NAD(+)]; Prostaglandin dehydrogenase 1; Short chain dehydrogenase/reductase family 36C member 1
Species	Human
Expression System	E. coli
Accession	P15428
Molecular Weight	Predictes a molecular mass of 30.63 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 31 kDa band.

Product Information

Sequence Region	1-266
Form	Lyophilized powder
Formulation	Lyophilized from sterile PBS, pH 7.4
Purity	>87%, by SDS-PAGE with Coomassie Brilliant Blue staining.
Endotoxin	Not tested.
Activity	Not tested.
Stability	Samples are stable for up to twelve months from date of receipt at -70℃
Protein Construction	DNA encoding 1-266 aa (P15428) were fused with 6His tag.

Storage & Handling

Reconstitution	Reconstitute at 0.25 μg/μl in sterile water for short-term storage. Reconstitution with 50% glycerol solution is recommended for longer term storage (see Stability and Storage for more details). If a different concentration is needed for your purposes please adjust the reconstitution volume as required (please note: the ion concentration of the final solution will vary according to the volume used). Note: Centrifuge vial before opening. When reconstituting, gently pipet and wash down the sides of the vial to ensure full recovery of the protein into solution.
Storage	Store it under sterile conditions at -20℃ to -80℃. It is recommended that the protein be aliquoted for optimal storage. Avoid repeated freeze-thaw cycles.
Shipping	In general, recombinant proteins are provided as lyophilized powder which are shipped at ambient temperature. Bulk packages of recombinant proteins are provided as frozen liquid. They are shipped out with blue ice unless customers require otherwise.

Description

Description	Recombinant Human 15-Hydroxyprostaglandin Dehydrogenase [NAD(+)] (15-PGDH) Fragment (1-266 aa) is a highly purified, stable protein fragment designed for structural and biochemical studies. This fragment encompasses key functional domains, offering researchers a reliable tool to investigate the enzyme's role in metabolizing hydroxylated polyunsaturated fatty acids, including prostaglandins and resolvins, with implications in inflammation and cancer research. 15-Hydroxyprostaglandin Dehydrogenase [NAD(+)] (15-PGDH), encoded by the HPGD gene in Homo sapiens, is a cytoplasmic enzyme that catalyzes the NAD-dependent oxidation of a broad range of hydroxylated polyunsaturated fatty acids, such as eicosanoids and docosanoids. It plays a critical role in regulating the levels of pro-proliferative prostaglandins (e.g., prostaglandin E2) and pro-inflammatory mediators by converting them into keto metabolites, thereby influencing cell proliferation and inflammation resolution. Additionally, 15-PGDH inactivates resolvins (e.g., resolvins E1, D1, and D2), which are essential for resolving acute inflammation and modulating obesity-induced adipose inflammation. Its function is significant in contexts like cancer, where prostaglandin levels are often elevated, highlighting its potential as a therapeutic target.