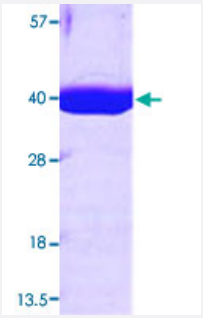
Bioactive

MDH2 (Human) Recombinant Protein

Catalog # P3513 Size 50 ug

Applications



Specification

Product Description	Human MDH2 (NP_005909, 25 a.a. - 338 a.a.) partial recombinant protein with His tag expressed in *Escherichia coli*.
Sequence	MGSSHHHHHHSSGLVPRGSHMAKVAVLGASGGIGQPLSLLLKNSPLVSRLTLYDIAHTPGVAADL SHIETKAAVKGYLGPEQLPDCLKGCDVVVIPAGVPRKPGMTRDDLFNTNATIVATLTAACAQHCP EAMICVIANPVNSTIPITAEVFKKHGVYNPNKIFGVTTLDIVRANTFVAELKGLDPARVNVPVIGGHA GKTIIPLISQCTPKVDFPQDQLTALTGRIQEAGTEVVKAKAGAGSATLSMAYAGARFVFSLVDAMN GKEGVVECSFVKSQETECTYFSTPLLLGKKGIEKNLGIGKVSSFEEKMISDAIPELKASIKKGEDFV KTLK
Theoretical MW (kDa)	35.2
Form	Liquid
Preparation Method	*Escherichia coli* expression system
Purification	Conventional Chromatography
Concentration	1 mg/mL
Purity	> 95% by SDS-PAGE
Activity	Specific activity is > 30 units/mg, and is defined as the amount of enzyme that cleaves 1umole of oxal acetate and beta-NADH to L-malate and beta-NAD per minute at pH7.5 at 25°C.

Quality Control Testing	Loading 3 ug protein in 15% SDS-PAGE
Storage Buffer	In 20 mM Tris-HCl buffer, pH 7.5 (10% glycerol).
Storage Instruction	Store at 2°C to 8°C for 1 week. For long term storage, aliquot and store at -20°C to -80°C. Aliquot to avoid repeated freezing and thawing.

Applications

- Functional Study
- SDS-PAGE

Gene Info — MDH2

Entrez GeneID	4191
Protein Accession#	NP_005909
Gene Name	MDH2
Gene Alias	M-MDH, MDH, MGC:3559, MOR1
Gene Description	malate dehydrogenase 2, NAD (mitochondrial)
Omim ID	154100
Gene Ontology	Hyperlink
Gene Summary	Malate dehydrogenase catalyzes the reversible oxidation of malate to oxaloacetate, utilizing the NAD/NADH cofactor system in the citric acid cycle. The protein encoded by this gene is localized to the mitochondria and may play pivotal roles in the malate-aspartate shuttle that operates in the metabolic coordination between cytosol and mitochondria. [provided by RefSeq
Other Designations	mitochondrial malate dehydrogenase

Pathway

- Biosynthesis of alkaloids derived from histidine and purine
- Biosynthesis of alkaloids derived from ornithine

- Biosynthesis of alkaloids derived from shikimate pathway
- Biosynthesis of alkaloids derived from terpenoid and polyketide
- Biosynthesis of phenylpropanoids
- Biosynthesis of plant hormones
- Biosynthesis of terpenoids and steroids
- Carbon fixation in photosynthetic organisms
- Citrate cycle (TCA cycle)
- Glyoxylate and dicarboxylate metabolism
- Metabolic pathways
- Pyruvate metabolism
- Reductive carboxylate cycle (CO2 fixation)

Disease

- Tobacco Use Disorder