3050 Spruce Street, St. Louis, MO 63103 USA
Tel: (800) 521-8956 (314) 771-5765 Fax: (800) 325-5052 (314) 771-5757
email: techservice@sial.com sigma-aldrich.com

Product Information

PDHA1 (30-390), His-tagged, human recombinant, expressed in *E. coli* cells

Catalog Number **SRP5238**
Storage Temperature –70 °C

Synonyms: PDHA, PDHCE1A, PHE1A

Product Description

PDHA1 [pyruvate dehydrogenase (lipoamide) α1] is a member of the pyruvate dehydrogenase (PDH) complex. PDHA1 is a nuclear-encoded mitochondrial multienzyme complex, which catalyzes the overall conversion of pyruvate to acetyl-CoA and CO_2, and provides the primary link between glycolysis and the tricarboxylic acid (TCA) cycle. PDHA1 plays a critical role in the brain that usually obtains all of its energy from the aerobic oxidation of glucose.[1] Mutations in PDHA1 are associated with pyruvate dehydrogenase E1-alpha deficiency and X-linked Leigh syndrome.[2]

Recombinant human PDHA1 (30-390) was expressed in *E. coli* cells using an N-terminal His tag. The gene accession number is NM_000284. Recombinant protein stored in 50 mM sodium phosphate, pH 7.0, 300 mM NaCl, 150 mM imidazole, 0.1 mM PMSF, 0.25 mM DTT, and 25% glycerol.

Molecular mass: ~47 kDa

Purity: 70–95% (SDS-PAGE, see Figure 1)

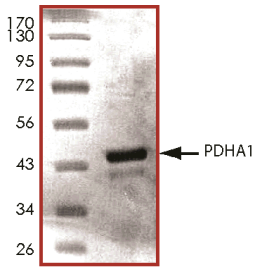
Precautions and Disclaimer

This product is for R&D use only, not for drug, household, or other uses. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.

Storage/Stability

The product ships on dry ice and storage at –70 °C is recommended. After opening, aliquot into smaller quantities and store at –70 °C. Avoid repeated handling and multiple freeze/thaw cycles.

Figure 1.
SDS-PAGE Gel of Typical Lot
70–95% (densitometry)



References

1. Brown, G.K. et. al., Pyruvate dehydrogenase deficiency. J. Med. Genet., **31**, 875-879 (1994).
2. Chun, K. et. al., Mutations in the X-linked E1-alpha subunit of pyruvate dehydrogenase leading to deficiency of the pyruvate dehydrogenase complex. Hum. Molec. Genet., **2**, 449-454 (1993).

RC,MAM 11/11-1