

# Human PHGDH, N-Twin Strep, C-His, Flag Tag Protein

## HA210678



<b>Product name:</b>	Human PHGDH, N-Twin Strep, C-His, Flag Tag
<b>Species reactivity:</b>	Human
<b>Bio-Activity:</b>	Testing in progress.
<b>Protein construction description:</b>	A DNA sequence encoding the human PHGDH protein (O43175) (Met 1-Phe 533) was expressed with a Twin strep tag at the N-terminus and both His, Flag tag at the C-terminus.

**Background:** This gene encodes the enzyme which is involved in the early steps of L-serine synthesis in animal cells. L-serine is required for D-serine and other amino acid synthesis. The enzyme requires NAD/NADH as a cofactor and forms homotetramers for activity. Mutations in this gene have been found in a family with congenital microcephaly, psychomotor retardation and other symptoms. Multiple alternatively spliced transcript variants have been found, however the full-length nature of most are not known. Catalyzes the reversible oxidation of 3-phospho-D-glycerate to 3-phosphonoxy pyruvate, the first step of the phosphorylated L-serine biosynthesis pathway. Also catalyzes the reversible oxidation of 2-hydroxyglutarate to 2-oxoglutarate and the reversible oxidation of (S)-malate to oxaloacetate.

**Purity:** >95% as determined by SDS-PAGE.

**Endotoxin:** Less than 1.0 EU per µg by the LAL method.

**Fragment region:** PHGDH (1-533)

**Source:** E.coli

**Accession:** O43175

**Predicted molecular mass:** 63.3 kD

**Formulation:** Lyophilized from a 0.2 µm filtered solution of PBS, pH7.4, 5% Trehalose, 5% mannitol.

**Reconstitution:** Reconstitute at 250 µg/ml in sterile water.

**Storage:** Please avoid repeated freeze-thaw cycles. Samples are stable for up to twelve months from date of receipt at -20°C to -80°C. It is recommended that aliquot the reconstituted solution to minimize freeze-thaw cycles.

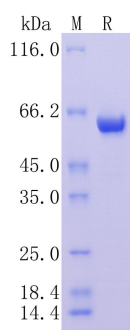
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**Fig1:** Protein on SDS-PAGE under reducing (R) condition.

**Note:** All products are "FOR RESEARCH USE ONLY AND ARE NOT INTENDED FOR DIAGNOSTIC OR THERAPEUTIC USE".