ALAS2 Protein, Human (His)

Cat. No.:	HY-P78950
Synonyms:	5-aminolevulinate synthase, erythroid-specific, mitochondrial; ALAS-E; 5-aminolevulinic acid synthase 2; ALASE; ASB
Species:	Human
Source:	E. coli
Accession:	P22557 (Q50-A587)
Gene ID:	212
Molecular Weight:	Approximately 63.5 kDa

PROPERTIES

Biological Activity	The enzyme activity of this recombinant protein is testing in progress, we cannot offer a guarantee yet.
Appearance	Lyophilized powder.
Formulation	Lyophilized a 0.22 μm filtered solution of Tris-based buffer，50% glycerol.
Reconsititution	It is not recommended to reconstitute to a concentration less than 100 μg/mL in ddH_2O.
Storage & Stability	Stored at -20°C for 2 years. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer (with carrier protein). It is recommended to freeze aliquots at -20°C or -80°C for extended storage.
Shipping	Room temperature in continental US; may vary elsewhere.

DESCRIPTION

Background	The ALAS2 protein serves a critical role in heme biosynthesis by catalyzing the pyridoxal 5'-phosphate (PLP)-dependent condensation of succinyl-CoA and glycine to form aminolevulinic acid (ALA), with CoA and CO2 as by-products, as corroborated by various studies. Notably, ALAS2 significantly contributes to heme production during erythropoiesis, essential for hemoglobin synthesis in red blood cells. This enzymatic activity is a pivotal step in the heme biosynthetic pathway, ensuring the generation of ALA, a precursor molecule crucial for subsequent steps in heme synthesis. The catalytic activity of ALAS2 is reported to be 75-85% of isoform 1 activity, emphasizing its importance in providing the necessary building blocks for hemoglobin production and erythropoiesis.

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