Homocysteine α,γ-Lyase (rHCYase), Active, Recombinant

CATALOG NO: P1117-200 200 µg

ALTERNATE NAMES: α,γ-Homocysteinase, Methionine gamma-lyase, mgl1

SOURCE: *E.coli*

SEQUENCE: The sequence is of homocysteinase of *Trichomonas vaginalis*, encoded by mgl1 gene with three point mutations Phe47Leu, Asp172Glu, Ser308Tyr and an N terminal His tag.

PURITY: > 95% by SDS-PAGE

MOL. WEIGHT: ~43 kDa, HIS tag

FORM: Lyophilized

FORMULATION: Proprietary buffer

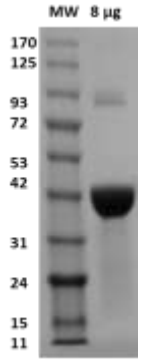
RECONSTITUTION: Reconstitute in 40 mM Sodium phosphate buffer, pH 8.1.

STORAGE CONDITIONS: Reconstituted enzyme can be stored in working aliquots at -20°C and use within 3 months. Avoid repeated freeze-thaw cycles.

DESCRIPTION: Recombinant Homocysteine α,γ-lyase is a pyridoxal-5'-phosphate dependent enzyme. It is a mutant of homocysteinase from *Trichomonas vaginalis* encoded by mgl1 gene, containing three point mutations, such as; Phe47Leu, Asp172Glu, Ser308Tyr. Its native molecular mass is 170 kD, with four seemingly identical subunits, each with molecular mass of 43-45 kD. The enzyme can metabolize homocysteine into α-keto butyrate, hydrogen sulfide and ammonia.

SPECIFIC ACTIVITY: ≥ 5 mU/mg, One Unit enzyme converts 1 µmole of homocysteine into hydrogen sulfide, per minute at 25 ºC and pH 8.1 in the presence of pyridoxal phosphate

A



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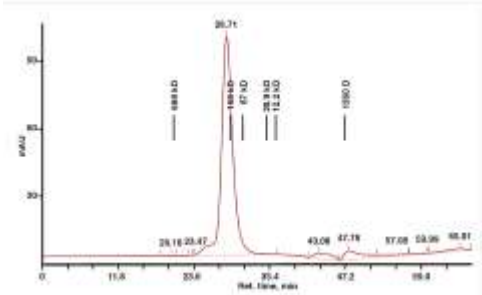

Fig A. SDS-PAGE (4-20%) of rHCYase: Recombinant Protein loaded under reducing conditions and stained with Coomassie Blue. The protein shows a predicted MW of ~ 43 kDa

Fig B. Size exclusion chromatography of rHCYase: SEC analysis of rHCYase using a Superose 12 HR 10/30 column at 0.4 ml/min in 50 mM Tris and 0.3 M NaCl pH 7.2

C

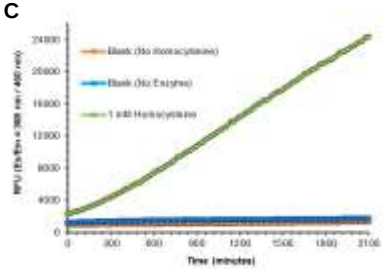

Fig C. Activity of active rHCYase: Specific activity of rHCYase is ≥5 mU/mg. In the assay hydrogen sulfite production from 1 mM homocysteine is measured by hydrogen sulfite probe using 1 µg rHCYase and pyridoxal phosphate.

RELATED PRODUCTS:

- Active AHCY, human recombinant **(Cat. No. 7527-10, -50, -1000)**
- Adenosylhomocysteinase (AHCY) Activity Fluorometric Assay Kit **(Cat. No. k807-100)**
- AHCY Inhibitor Screening Kit (Fluorometric) **(Cat. No. K326-100)**
- SAHH/AHCY Antibody **(Cat. No. 6684-100)**

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