

Recombinant Rat HEM3 Protein

For Research Use Only

1. Basic Product Information

Catalog No.: REP52300

Size: 10ug, 100ug

Protein Name: Porphobilinogen deaminase (PBG-D) (EC 2.5.1.61) (Hydroxymethylbilane synthase) (HMBS) (Pre-uroporphyrinogen synthase)

Synonym: Hmbs

UniProt ID: P19356

UniProt Link: www.uniprot.org/uniprotkb/P19356/entry

Species Source: Rat

Expression System: HEK293T eukaryotic cell expression system Sequence

Length: 361 AA

Molecular Weight: 39 KD

Protein Tag: C-terminal His6

2. Amino Acid Sequence

MSGNGGAATTAEENGSMRVRVVGTRKSQLARIQTDTVVAMLKTLYPGIQFEIIAMSTTGDKILD
TALSKIGEKSFLTKELENALEKNEVDLVVHSLKDVPTILPPGFTIGAICKRENPCDAVVFHPKFIGKTLETLP
EKSAVGTSSLRRAVQLQRKFPHFLEFKSIRGNLNTRLRLKLDEQLEFSAILAVAGLQRMGWQNRVGQIL
HPEECMYAVGQGALAVEVRAKDQDILDVLGVLDHPETLLRCIAERAFLRHLEGGCSPVAVHTVMK
DGQLYLTGGVWSLDGSDSMQETMQATIQVPVQQEDGPEDDPQLVGITARNIPRGAQLAAENLGISL
ASLLLNGAKNILDVARQLNDVR

3. Buffer Composition

Liquid format: PBS-based buffer containing 50% glycerol. Glycerol concentration can be customized upon customer request; please state special requirements when placing your order.

Lyophilized format: Buffer before lyophilization is PBS supplemented with 6% trehalose.

4. Storage Conditions

Upon receipt, store the product at -20 °C or -80 °C. Aliquot the product for on-demand use to preserve protein activity and prevent denaturation and inactivation caused by repeated freeze-thaw cycles.

5. Product Description

This product is recombinant Porphobilinogen deaminase (PBG-D) (EC 2.5.1.61) (Hydroxymethylbilane synthase) (HMBS) (Pre-uroporphyrinogen synthase) produced using the HEK293T eukaryotic cell expression system. It is suitable for in-vitro functional assays, protein-protein interaction studies, antibody preparation and other biomedical research applications.

Protein Function: As part of the heme biosynthetic pathway, catalyzes the sequential polymerization of four molecules of porphobilinogen to form hydroxymethylbilane, also known as preuroporphyrinogen. Catalysis begins with the assembly of the dipyrromethane cofactor by the apoenzyme from two molecules of porphobilinogen or from preuroporphyrinogen. The covalently linked cofactor acts as a primer, around which the tetrapyrrole product is assembled. In the last step of catalysis, the product, preuroporphyrinogen, is released, leaving the cofactor bound to the holodeaminase intact.

Subcellular Localization: Cytoplasm, cytosol .

6. Notes

- Avoid repeated freeze-thaw cycles to maintain protein stability and biological activity.
- Please specify special buffer-composition requirements at the time of order placement.
- For research use only. Not intended for clinical diagnosis, therapeutic use or commercial manufacturing.