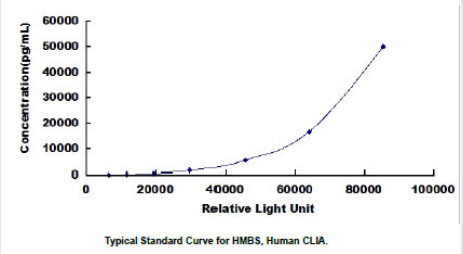
Hydroxymethylbilane Synthase (HMBS) CLIA Kit for Human

PRODUCT OVERVIEW

Product Name	Hydroxymethylbilane Synthase (HMBS), CLIA Kit
Full Product Name	Human Hydroxymethylbilane Synthase (HMBS) CLIA Kit
Product Gene Name	HMBS clia kit
Product Synonym Names	PBG-D; PBGD; UPS; Hydroxymethylbilane Synthase; Uroporphyrinogen I Synthase; Porphobilinogen deaminase; Pre-uroporphyrinogen synthase
Species Reactivity	Human
Assay Type	Double-antibody Sandwich
Samples	Tissue homogenates, Cell lysates and other biological fluids
Detection Range	68.6-50,000pg/mL
Sensitivity	25.8pg/mL
Specificity	This assay has high sensitivity and excellent specificity for detection of HMBS. No significant cross-reactivity or interference between HMBS and analogues was observed.
Preparation and Storage	The stability of kit is determined by the loss rate of activity. The loss rate of this kit is less than 5% within the expiration date under appropriate storage condition. To minimize extra influence on the performance, operation procedures and lab conditions, especially room temperature, air humidity, incubator temperature should be strictly controlled. It is also strongly suggested that the whole assay is performed by the same operator from the beginning to the end.
Inter-assay Precision	Inter-assay Precision (Precision between assays): 3 samples with low, middle and high level HMBS were tested on 3 different plates, 8 replicates in each plate. CV(%) = SD/meanX100. Inter-Assay: CV<12%
Intra-assay Precision	Intra-assay Precision (Precision within an assay): 3 samples with low, middle and high level HMBS were tested 20 times on one plate, respectively. Intra-Assay: CV<10%
Molecular Weight	361
OMIM	phenotype 609806
3D Structure	ModBase 3D Structure for P08397
Supply Chain Verification	Manufactured in a lab with traceable raw materials. Bulk orders can typically be prepared to the customer's specifications, please inquire.
Product Categories/Family for HMBS clia kit	Metabolic pathway
ISO Certification	Manufactured in an ISO 9001:2015 and ISO 13485:2016 Certified Laboratory.
Applications Tested/Suitable for HMBS clia kit	Chemiluminescence Immunoassay (CLIA)
Application Notes for HMBS clia kit	Chemiluminescent Immunoassay for Antigen Detection.

Related Product Information for HMBS clia kit	Intended Uses: The Chemiluminescent Immunoassay kit is designed for the in vitro sensitive quantitative measurement of HMBS in human tissue homogenates, cell lysates and other biological fluids. Principle of the Assay: The microplate provided in this kit has been pre-coated with an antibody specific to HMBS. Standards or samples are then added to the appropriate microplate wells with a biotin-conjugated antibody specific to HMBS. Next, Avidin conjugated to Horseradish Peroxidase (HRP) is added to each microplate well and incubated. Then the mixture of substrate A and B is added to generate glow light emission kinetics. Upon plate development, the intensity of the emitted light is proportional to the HMBS level in the sample or standard.
Other Notes	Small volumes of HMBS clia kit vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.
Searchable Terms for HMBS purchase	MBS2124097 is a CLIA kit targeting HMBS. Also known as Human Hydroxymethylbilane Synthase (HMBS) CLIA Kit. Reactive in Human.



Typical Testing Data/Standard Curve (for reference only) of HMBS clia kit

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for HMBS. It may not necessarily be applicable to this product.

NCBI GI #	1170217
NCBI GeneID	3145
NCBI Accession #	P08397.2
UniProt Primary Accession #	P08397
UniProt Secondary Accession #	P08396; Q16012; A8K2L0; G3V1P4; G5EA58
UniProt Related Accession #	P08397
NCBI Official Full Name	Porphobilinogen deaminase
NCBI Official Synonym Full Names	hydroxymethylbilane synthase
NCBI Official Symbol	HMBS
NCBI Official Synonym Symbols	UPS; PBGD; PORC; PBG-D
UniProt Protein Name	Porphobilinogen deaminase
UniProt Synonym Protein Names	Hydroxymethylbilane synthase; HMBS; Pre-uroporphyrinogen synthase
Protein Family	Probable porphobilinogen deaminase
UniProt Gene Name	HMBS
UniProt Synonym Gene Names	PBGD; UPS; PBG-D; HMBS
UniProt Entry Name	HEM3_HUMAN
NCBI Protein Information	porphobilinogen deaminase; uroporphyrinogen I synthase; pre-uroporphyrinogen synthase; uroporphyrinogen I synthetase; porphyria, acute; Chester type

NCBI Summary for HMBS	This gene encodes a member of the hydroxymethylbilane synthase superfamily. The encoded protein is the third enzyme of the heme biosynthetic pathway and catalyzes the head to tail condensation of four porphobilinogen molecules into the linear hydroxymethylbilane. Mutations in this gene are associated with the autosomal dominant disease acute intermittent porphyria. Alternatively spliced transcript variants encoding different isoforms have been described. [provided by RefSeq, Jul 2008]
UniProt Comments for HMBS	HMBS: Tetrapolymerization of the monopyrrole PBG into the hydroxymethylbilane pre-uroporphyrinogen in several discrete steps. Defects in HMBS are the cause of acute intermittent porphyria (AIP). AIP is a form of porphyria. Porphyrias are inherited defects in the biosynthesis of heme, resulting in the accumulation and increased excretion of porphyrins or porphyrin precursors. They are classified as erythropoietic or hepatic, depending on whether the enzyme deficiency occurs in red blood cells or in the liver. AIP is an autosomal dominant form of hepatic porphyria characterized by acute attacks of neurological dysfunctions with abdominal pain, hypertension, tachycardia, and peripheral neuropathy. Most attacks are precipitated by drugs, alcohol, caloric deprivation, infections, or endocrine factors. Belongs to the HMBS family. 2 isoforms of the human protein are produced by alternative splicing. Protein type: EC 2.5.1.61; Cofactor and Vitamin Metabolism - porphyrin and chlorophyll; Transferase; Mitochondrial Chromosomal Location of Human Ortholog: 11q23.3 Cellular Component: cytosol Molecular Function: hydroxymethylbilane synthase activity Biological Process: porphyrin metabolic process; protoporphyrinogen IX biosynthetic process; peptidyl-pyrromethane cofactor linkage; heme biosynthetic process Disease: Porphyria, Acute Intermittent
Research Articles on HMBS	**1.** Conformational stability and activity of hydroxymethylbilane synthase (HMSB) and the acute intermittent porphyria K132N and V215E HMSB mutations.
Precautions	All of MyBioSource's Products are for scientific laboratory research purposes and are not for diagnostic, therapeutics, prophylactic or in vivo use. Through your purchase, you expressly represent and warrant to MyBioSource that you will properly test and use any Products purchased from MyBioSource in accordance with industry standards. MyBioSource and its authorized distributors reserve the right to refuse to process any order where we reasonably believe that the intended use will fall outside of our acceptable guidelines.
Disclaimer	While every efforts were made to ensure the accuracy of the information provided in this datasheet, MyBioSource will not be liable for any omissions or errors contained herein. MyBioSource reserves the right to make changes to this datasheet at any time without prior notice. It is the responsibility of the customer to report product performance issues to MyBioSource within 30 days of receipt of the product. Please visit our Terms & Conditions page for more information.
Product Note	Select online data sheet information is drawn from bioinformatics databases, occasionally resulting in ambiguous or non-relevant product information. It is the responsibility of the customer to review, verify, and evaluate the information to make sure it matches their requirements before purchasing the kit. Our ELISA Kit assays are dynamic research tools and sometimes they may be updated and improved. If the format of this assay is important to you then please request the current manual or contact our technical support team with a presales inquiry before placing an order. We will confirm the current details of the assay. We cannot guarantee the sample manual posted online is the most current manual, it is intended to serve as an example only. Please refer to the instructions For Use provided with the assay kit for precise details.

For Research Use Only. Not for use in diagnostic or therapeutic procedures.

MyBioSource | Tel: +1.858.633.0165 | Fax: +1.858.633.0166 | mybiosource.com/contact-us
Online datasheet: https://www.mybiosource.com/human-clia-kits/hydroxymethylbilane-synthase-hmbs/2124097