

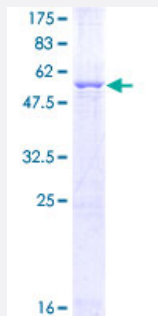
Full-Length

GCH1 (Human) Recombinant Protein (P01)

Catalog # H00002643-P01

Size 25 ug, 10 ug

Applications



Specification

Product Description

Human GCH1 full-length ORF (AAH25415.1, 1 a.a. - 250 a.a.) recombinant protein with GST-tag at N-terminal.

Sequence

MEKGPVRAPAEKPRGARCSNGFPERDPPRPGPSRPAEKPPRPEAKSAQPADGWKGERPRSE
EDNELNLPNLAAAYSSILSSLGENPQRQGLLKTPWRAASAMQFFTKGYQETISDVLNDAIFDEDHD
EMVVKDIDMFSMCEHHLVPFVGKVHIGYLPNKQVLGLSKLARIVEIYSRRLQVQERLTKQIAVAITE
ALRPAGVGVVVEATHMCMVMRGVQKMNSKTVTSTMLGVFREDPKTREEFLTIRS

Host

Wheat Germ (in vitro)

Theoretical MW (kDa)

53.24

Preparation Method

[in vitro wheat germ expression system](#)

Purification

Glutathione Sepharose 4 Fast Flow

Quality Control Testing

12.5% SDS-PAGE Stained with Coomassie Blue.

Storage Buffer

50 mM Tris-HCl, 10 mM reduced Glutathione, pH=8.0 in the elution buffer.

Storage Instruction

Store at -80°C. Aliquot to avoid repeated freezing and thawing.

Note

Best use within three months from the date of receipt of this protein.

Applications

- Enzyme-linked Immunoabsorbent Assay
- Western Blot (Recombinant protein)
- Antibody Production
- Protein Array

Gene Info — GCH1

Entrez GeneID [2643](#)

GeneBank Accession# [BC025415](#)

Protein Accession# [AAH25415.1](#)

Gene Name GCH1

Gene Alias DYT14, DYT5, GCH, GTP-CH-1, GTPCH1

Gene Description GTP cyclohydrolase 1

Omim ID [128230](#) [233910](#) [600225](#)

Gene Ontology [Hyperlink](#)

Gene Summary This gene encodes a member of the GTP cyclohydrolase family. The encoded protein is the first and rate-limiting enzyme in tetrahydrobiopterin (BH4) biosynthesis, catalyzing the conversion of GTP into 7,8-dihydroneopterin triphosphate. BH4 is an essential cofactor required by aromatic amino acid hydroxylases as well as nitric oxide synthases. Mutations in this gene are associated with malignant hyperphenylalaninemia and dopa-responsive dystonia. Several alternatively spliced transcript variants encoding different isoforms have been described; however, not all variants give rise to a functional enzyme. [provided by RefSeq]

Other Designations guanosine 5'-triphosphate cyclohydrolase I

Publication Reference

- [Regulation of Tetrahydrobiopterin Biosynthesis by Shear Stress.](#)

Widder JD, Chen W, Li L, Dikalov S, Thony B, Hatakeyama K, Harrison DG.

Circulation Research 2007 Aug; 101(8):830.

Application: Enzyme, Human, Human aortic endothelial cells (HAECs)

Pathway

- [Folate biosynthesis](#)
- [Metabolic pathways](#)

Disease

- [Acute Disease](#)
- [Autistic Disorder](#)
- [Cardiovascular Diseases](#)
- [Cerebrovascular Disorders](#)
- [Chromosome Aberrations](#)
- [Chromosome Deletion](#)
- [Chronic Disease](#)
- [Coronary Artery Disease](#)
- [Coronary Disease](#)
- [Diabetes Mellitus](#)
- [Diabetic Angiopathies](#)
- [Dystonia](#)
- [Dystonic Disorders](#)
- [Edema](#)
- [Genetic Predisposition to Disease](#)
- [Hypertension](#)

- [Labor Pain](#)
- [Low Back Pain](#)
- [Mental Retardation](#)
- [Neoplasms](#)
- [Pain](#)
- [Pain Threshold](#)
- [Pancreatitis](#)
- [Parkinson disease](#)
- [Sciatica](#)