

Product datasheet for **CF810265**

GTP cyclohydrolase 1 (GCH1) Mouse Monoclonal Antibody [Clone ID: OTI5A1]

Product data:

Product Type:	Primary Antibodies
Clone Name:	OTI5A1
Applications:	IHC, WB
Recommended Dilution:	WB 1:2000, IHC 1:500
Reactivity:	Human, Mouse, Rat
Host:	Mouse
Isotype:	IgG1
Clonality:	Monoclonal
Immunogen:	Full length human recombinant protein of human GCH1 (NP_001019195) produced in E.coli.
Formulation:	Lyophilized powder (original buffer 1X PBS, pH 7.3, 8% trehalose)
Reconstitution Method:	For reconstitution, we recommend adding 100uL distilled water to a final antibody concentration of about 1 mg/mL. To use this carrier-free antibody for conjugation experiment, we strongly recommend performing another round of desalting process. (OriGene recommends Zeba Spin Desalting Columns, 7KMWCO from Thermo Scientific)
Purification:	Purified from mouse ascites fluids or tissue culture supernatant by affinity chromatography (protein A/G)
Conjugation:	Unconjugated
Storage:	Store at -20°C as received.
Stability:	Stable for 12 months from date of receipt.
Predicted Protein Size:	27.7 kDa
Gene Name:	GTP cyclohydrolase 1
Database Link:	NP_001019195 Entrez Gene 14528 Mouse Entrez Gene 29244 Rat Entrez Gene 2643 Human P30793



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Background:

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, Jul 2008]

Synonyms:

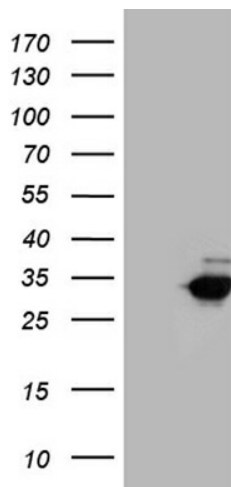
DYT5; DYT5a; DYT14; GCH; GTP-CH-1; GTPCH1; HPABH4B

Protein Families:

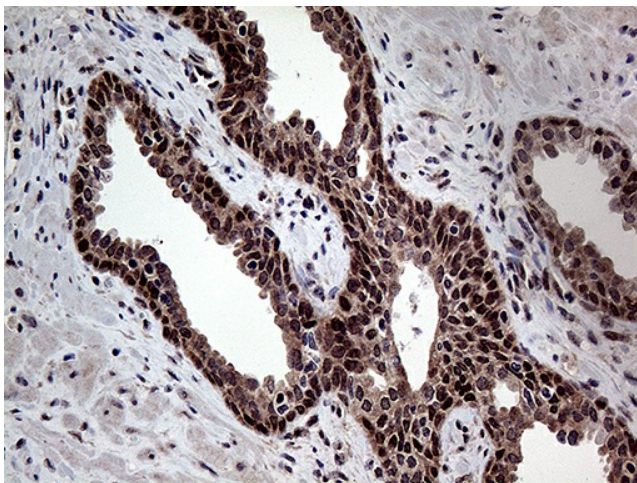
Druggable Genome

Protein Pathways:

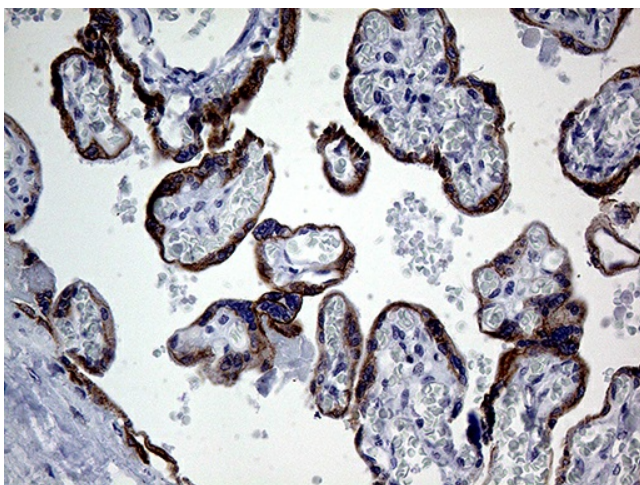
Folate biosynthesis, Metabolic pathways

Product images:


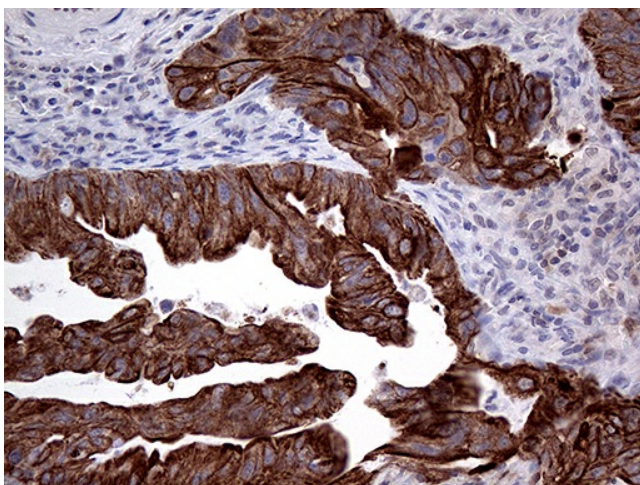
HEK293T cells were transfected with the pCMV6-ENTRY control (Cat# [PS100001], Left lane) or pCMV6-ENTRY GCH1 (Cat# [RC224968], Right lane) cDNA for 48 hrs and lysed. Equivalent amounts of cell lysates (5 ug per lane) were separated by SDS-PAGE and immunoblotted with anti-GCH1 (Cat# [TA810265])(1:2000). Positive lysates [LY422611] (100ug) and [LC422611] (20ug) can be purchased separately from OriGene.



Immunohistochemical staining of paraffin-embedded Human skin tissue within the normal limits using anti-GCH1 mouse monoclonal antibody. (Heat-induced epitope retrieval by 1mM EDTA in 10mM Tris buffer (pH8.5) at 120°C for 3min, [TA810265]) (1:500)



Immunohistochemical staining of paraffin-embedded Human placenta tissue within the normal limits using anti-GCH1 mouse monoclonal antibody. (Heat-induced epitope retrieval by 1mM EDTA in 10mM Tris buffer (pH8.5) at 120°C for 3min, [TA810265]) (1:500)



Immunohistochemical staining of paraffin-embedded Human spleen carcinoma tissue within the normal limits using anti-GCH1 mouse monoclonal antibody (1:500).