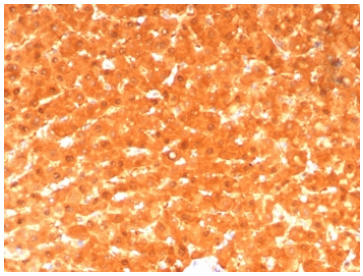
# GCHFR Antibody / GTP Cyclohydrolase Feedback Regulator Antibody [clone GCHFR/7734] (V4372)

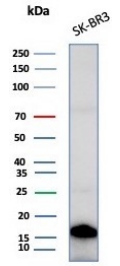
| Catalog No. | Formulation | Size |
|---|---|---|
| V4372-100UG | 0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced), 0.05% sodium azide | 100 ug |
| V4372-20UG | 0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced), 0.05% sodium azide | 20 ug |
| V4372SAF-100UG | 1 mg/ml in 1X PBS; BSA free, sodium azide free | 100 ug |

**Bulk quote request**

| | |
|---|---|
| **Availability** | 1-3 business days |
| **Species Reactivity** | Human |
| **Format** | Purified |
| **Host** | Mouse |
| **Clonality** | Monoclonal (mouse origin) |
| **Isotype** | Mouse IgG2, kappa |
| **Clone Name** | GCHFR/7734 |
| **Purity** | Protein A/G affinity |
| **UniProt** | P30047 |
| **Localization** | Lysosome |
| **Applications** | Western blot: 1-2ug/ml<br>Immunohistochemistry (FFPE): 1-2ug/ml for 30 minutes at RT |
| **Limitations** | This GCHFR Antibody / GTP Cyclohydrolase Feedback Regulator Antibody is available for research use only. |



GCHFR Antibody Liver IHC. Immunohistochemistry analysis of FFPE human liver tissue stained with GCHFR Antibody clone GCHFR/7734 demonstrates strong diffuse cytoplasmic HRP-DAB brown staining throughout hepatocyte-associated cellular populations, consistent with the role of GTP cyclohydrolase I feedback regulator / GCHFR in tetrahydrobiopterin metabolism and nitric oxide-associated metabolic signaling pathways. The widespread hepatic staining profile aligns with the intracellular cofactor regulatory function of GCHFR in metabolic homeostasis and redox-associated cellular regulation. HIER: boil tissue sections in pH 9 10mM Tris with 1mM EDTA for 20 min and allow to cool before testing.




GCHFR Antibody SK-BR-3 WB. Western blot analysis of human SK-BR-3 cell lysate using GCHFR Antibody clone GCHFR/7734 demonstrates a distinct band at approximately 10-12 kDa, consistent with the predicted molecular weight of GTP cyclohydrolase I feedback regulator / GCHFR. The observed expression pattern aligns with the role of GCHFR as a tetrahydrobiopterin-associated metabolic regulatory protein involved in nitric oxide signaling, cofactor homeostasis, and intracellular redox-associated pathways.

## Description

GTP cyclohydrolase I feedback regulator (GCHFR), also known as GFRP, is a regulatory protein involved in modulation of tetrahydrobiopterin (BH4) biosynthesis and metabolic feedback control of GTP cyclohydrolase I activity. The GCHFR Antibody / GTP Cyclohydrolase Feedback Regulator Antibody clone GCHFR/7734 is designed for detection of GCHFR expression in studies involving BH4 regulatory pathways, nitric oxide-associated metabolism, and cofactor-dependent cellular signaling mechanisms.

GCHFR is encoded by the GCHFR gene on chromosome 15q15 and functions as a feedback regulatory component controlling intracellular tetrahydrobiopterin production through interactions with GTP cyclohydrolase I. This regulatory relationship helps coordinate BH4 availability in response to metabolic demands and signaling-associated cellular conditions. BH4 functions as a critical cofactor for nitric oxide synthases and aromatic amino acid hydroxylases involved in neurotransmitter synthesis and nitric oxide-associated signaling pathways.

Regulation of BH4 metabolism is closely linked to endothelial signaling, oxidative stress responses, vascular physiology, neurotransmitter-associated metabolic pathways, and inflammatory signaling mechanisms. Altered BH4 homeostasis has been associated with cardiovascular dysfunction, inflammatory signaling abnormalities, neurologic disorders, and oxidative stress-associated cellular injury. Because GCHFR functions within the regulatory machinery governing BH4 synthesis, the protein remains an important target in studies involving nitric oxide biology and metabolic cofactor regulation.

GCHFR-associated pathways have also attracted interest in vascular and inflammatory research due to the importance of nitric oxide signaling in endothelial homeostasis, cytokine-responsive pathways, and immune-associated stress responses. Changes in intracellular BH4 levels may influence nitric oxide synthase coupling efficiency, reactive oxygen species generation, and redox-sensitive signaling cascades involved in metabolic adaptation and inflammatory regulation.

The clone GCHFR/7734 monoclonal antibody supports research applications involving western blotting and immunohistochemical analysis of GCHFR-associated metabolic signaling pathways. Immunohistochemical staining using GCHFR antibodies commonly demonstrates cytoplasmic localization patterns consistent with the intracellular metabolic regulatory function of this BH4-associated feedback protein.

GCHFR continues to serve as an important target in studies involving nitric oxide metabolism, tetrahydrobiopterin biosynthesis, metabolic feedback regulation, endothelial signaling, and cofactor-associated cellular signaling pathways. For broader analysis of BH4 metabolism and nitric oxide-associated signaling biology, see our GCHFR Antibody / Tetrahydrobiopterin Metabolism Regulator Antibody.

## Application Notes

Optimal dilution of the GCHFR Antibody / GTP Cyclohydrolase Feedback Regulator Antibody should be determined by the researcher.

## Immunogen

A recombinant fragment of human GCHFR protein was used as the immunogen for the GCHFR antibody.

## Storage

Aliquot the GCHFR antibody and store frozen at -20oC or colder. Avoid repeated freeze-thaw cycles.

## Alternate Names

GCHFR antibody, GTP cyclohydrolase I feedback regulator antibody, GFRP antibody, GTPCH feedback regulator antibody, BH4 regulatory protein antibody


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