

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human GCHFR in ELISAs.
Source	Monoclonal Mouse IgG ₁ Clone # 846011
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	<i>E. coli</i> -derived recombinant human GCHFR Met1-Glu84 Accession # P30047
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied as a 0.2 µm filtered solution in PBS.

APPLICATIONS

Please Note: Optimal dilutions should be determined by each laboratory for each application. General Protocols are available in the Technical Information section on our website.

	Recommended Concentration	Sample
Western Blot	1 µg/mL	See Below
Simple Western	10 µg/mL	See Below

DATA

Western Blot

Detection of Human and Mouse GCHFR by Western Blot. Western blot shows lysates of Hep3B human hepatocellular carcinoma cell line, Bowes human melanoma cell line, and XB2 mouse teratoma keratinocyte cell line. PVDF membrane was probed with 1 µg/mL of Mouse Anti-Human GCHFR Monoclonal Antibody (Catalog # MAB7918) followed by HRP-conjugated Anti-Mouse IgG Secondary Antibody (Catalog # HAF007). A specific band was detected for GCHFR at approximately 11 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 1.

Simple Western

Detection of Human GCHFR by Simple Western™. Simple Western lane view shows lysates of HepG2 human hepatocellular carcinoma cell line and Hep3B human hepatocellular carcinoma cell line, loaded at 0.5 mg/mL. A specific band was detected for GCHFR at approximately 11 kDa (as indicated) using 10 µg/mL of Mouse Anti-Human GCHFR Monoclonal Antibody (Catalog # MAB7918). This experiment was conducted under reducing conditions and using the 12-230 kDa separation system.

PREPARATION AND STORAGE

Reconstitution	Sterile PBS to a final concentration of 0.5 mg/mL.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
Stability & Storage	Use a manual defrost freezer and avoid repeated freeze-thaw cycles. <ul style="list-style-type: none"> ● 12 months from date of receipt, -20 to -70 °C as supplied. ● 1 month, 2 to 8 °C under sterile conditions after reconstitution. ● 6 months, -20 to -70 °C under sterile conditions after reconstitution.

BACKGROUND

GCHFR (GTP cyclohydrolase I feedback receptor), also called GFRP, is an 84 amino acid enzyme inhibitor that binds to and regulates the activity of GTP cyclohydrolase I. GTP cyclohydrolase I is the rate-limiting enzyme in biosynthesis of tetrahydrobiopterin, an essential cofactor for nitric oxide synthases and aromatic hydrolases. GCHFR is found as a 20 kDa homodimer in the nucleus and cytoplasm of multiple cell types, including endothelial cells, keratinocytes and melanocytes. Human GCHFR shares 93% amino acid sequence identity with mouse and rat GCHFR, which in turn share 100% identity with each other.