

**DESCRIPTION**

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

	<b>Recommended Concentration</b>	<b>Sample</b>
<b>Western Blot</b>	1 µg/mL	See Below
<b>Simple Western</b>	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**

<b>Reconstitution</b>	Sterile PBS to a final concentration of 0.5 mg/mL.
<b>Shipping</b>	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
<b>Stability &amp; Storage</b>	<b>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</b> <ul style="list-style-type: none"> <li>● 12 months from date of receipt, -20 to -70 °C as supplied.</li> <li>● 1 month, 2 to 8 °C under sterile conditions after reconstitution.</li> <li>● 6 months, -20 to -70 °C under sterile conditions after reconstitution.</li> </ul>

**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.