

**DESCRIPTION**

<b>Species Reactivity</b>	Human/Mouse/Rat
<b>Specificity</b>	Detects human HOMER1 in direct ELISAs.
<b>Source</b>	Monoclonal Mouse IgG <sub>2B</sub> Clone # 666241
<b>Purification</b>	Protein A or G purified from hybridoma culture supernatant
<b>Immunogen</b>	Synthetic peptide KFGQWADSRA corresponding to aa 73-82 of human HOMER1 Accession # Q86YM7
<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 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>	2 µg/mL	See Below
<b>Simple Western</b>	20 µg/mL	See Below

**DATA**

**Western Blot**

**Detection of Human HOMER1 by Western Blot.** Western blot shows lysates of human brain (cerebellum) tissue and IMR-32 human neuroblastoma cell line. PVDF membrane was probed with 2 µg/mL of Mouse Anti-HOMER1 Monoclonal Antibody (Catalog # MAB6889) followed by HRP-conjugated Anti-Mouse IgG Secondary Antibody (Catalog # HAF007). A specific band was detected for HOMER1 at approximately 52 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 5.

**Simple Western**

**Detection of Human and Mouse HOMER1 by Simple Western™.** Simple Western lane view shows lysates of human brain (cerebellum) tissue, loaded at 0.2 mg/mL. A specific band was detected for HOMER1 at approximately 51 kDa (as indicated) using 20 µg/mL of Mouse Anti-Human/Mouse/Rat HOMER1 Monoclonal Antibody (Catalog # MAB6889). 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**

HOMER1 is an approximately 48 kDa cytoplasmic protein that regulates the cell surface localization of neuronal mGluR1 and mGluR5 metabotropic glutamate receptors. It also functions in striated muscle mechanotransduction and excitation-contraction coupling by regulating the localization of transient receptor potential (TRP) channels and the coupling of ryanodine receptors to Cav1.2 calcium channels. Alternately spliced isoforms of human HOMER1 lack either the C-terminal half of the molecule (aa 178-354) or 130 aa following the WH1 domain (aa 99-228). Particular isoforms show distinct effects on hippocampal neuronal plasticity and the maintenance of extracellular glutamate levels in the prefrontal cortex. Within aa 73-82, human HOMER1 shares 100% aa sequence identity with mouse and rat HOMER1.