

**DESCRIPTION**

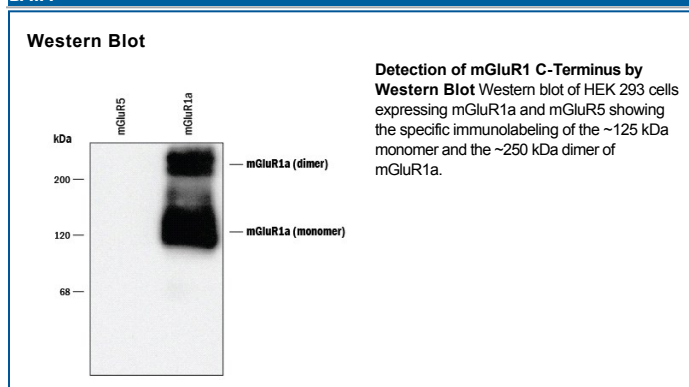
<b>Species Reactivity</b>	Rat
<b>Specificity</b>	Rat ~125 kDa and ~250 kDa dimer mGluR1a
<b>Source</b>	Polyclonal Rabbit IgG
<b>Purification</b>	Antigen Affinity-purified
<b>Immunogen</b>	Peptide from the C-terminus region of rat mGluR1a
<b>Formulation</b>	100 µL in 10 mM HEPES (pH 7.5), 150 mM NaCl, 100 µg/mL BSA, and 50% glycerol. See Certificate of Analysis for details.

**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>	1:1000 dilution	See Below
<b>Immunohistochemistry</b>	(frozen sections; unpublished observations)	

**DATA**



**PREPARATION AND STORAGE**

<b>Shipping</b>	The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.
<b>Stability &amp; Storage</b>	For long-term storage, ≤ -20° C is recommended. Product is stable at ≤ -20° C for at least 1 year.

**BACKGROUND**

Rat metabotropic glutamate receptor 1 (mGluR1a; also mGlu1a) is a 140 kDa, 1181 amino acid (aa), 7-transmembrane glycoprotein that belongs to group I of the C-family of G-protein coupled receptors. Group I receptors include mGluR1 and mGluR5. Both are postsynaptic, associated with Gq-like proteins, mobilize Ca<sup>++</sup> from intracellular stores, and regulate neuronal excitability by influencing ion channel activity. Their activities are not necessarily redundant. When co-expressed on select neurons, mGluR5 tends to dampen mGluR1 activity. On T cells, mGluR1 is inducible and promotes cell proliferation, while mGluR5 is constitutive and blocks proliferation. mGluR1 has a large glycosylated extracellular domain (ECD) of 574 aa. The ECD either covalently homodimerizes or heterodimerizes with the Ca<sup>++</sup>-sensor receptor (CaSR). Dimerization creates two subunit-linked "open clamshells" which first bind glutamate, then close, and subsequently undergo rearrangement for signal transduction. There are two alternate splice forms of rat mGluR1. Each shows a short aa substitution and premature truncation after N887 in the cytoplasmic region. The cytoplasmic, C-terminal 310 amino acids of rat mGluR1a are 90% and 97% aa identical to the analogous amino acids in human and mouse mGluR1a, respectively.

**References:**

1. Pin, J-P. and F. Acher (2002) *Curr. Drug Targets CNS Neurol. Disord.* 1:297.
2. Boldyrev, A.A. et al. (2005) *J. Neurochem.* 95:913.
3. Poisik, O.V. et al. (2003) *J. Neurosci.* 23:122.
4. Ferraguti, F. and R. Shigemoto (2006) *Cell Tissue Res.* 326:483.
5. Gama, L. et al. (2001) *J. Biol. Chem.* 276:39053.