Phospho-IP3 Receptor (Ser1756) Antibody

**Background:** Inositol 1,4,5-triphosphate receptor, also known as IP3R or InsP3R, is a member of the intracellular calcium release channel family, and is located in the endoplasmic reticulum. It functions as a Ca^{2+} release channel for intracellular stores of calcium ions. There are three types of IP3 receptors (IP3 receptor 1, 2 and 3) that require the second messenger inositol 1,4,5-triphosphate (IP3) for activation (1). Four individual receptor subunits, resulting in homo- or hetero-oligomerization of the receptor isoform, form a functional channel (2). Phosphorylation of IP3R1 at Ser1756 by cyclic-AMP-dependent protein kinase A (PKA) regulates the sensitivity of IP3R1 to IP3 and may thus be a mode of regulation for Ca^{2+} release (3,4). IP3R1 mediated calcium release appears to have an effect on the induction of long term depression (LTD) in Purkinje cells (5).

**Specificity/Sensitivity:** Phospho-IP3 Receptor (Ser1756) Antibody detects endogenous levels of IP3 Receptor only when phosphorylated at Ser1756.

**Source/Purification:** Polyclonal antibodies are produced by immunizing animals with a synthetic phosphopeptide corresponding to residues surrounding Ser1756 of rat IP3 receptor. Antibodies are purified by peptide affinity chromatography.

**Applications, Species Cross-Reactivity, Molecular Wt., Source:**

<table>
<thead>
<tr>
<th>Applications</th>
<th>Species Cross-Reactivity</th>
<th>Molecular Wt.</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>W</td>
<td>H, M, R</td>
<td>320 kDa</td>
<td>Rabbit</td>
</tr>
</tbody>
</table>

**Storage:** Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA and 50% glycerol. Store at –20°C. Do not aliquot the antibody.

*Species cross-reactivity is determined by western blot.

**Anti-rabbit secondary antibodies must be used to detect this antibody.

**Recommended Antibody Dilutions:**
Western blotting 1:1000

**Entrez-Gene ID** # 3708
**Swiss-Prot Acc.** # Q14643

**Background References:**

© 2010 Cell Signaling Technology, Inc.

**IMPORTANT: For western blots, incubate membrane with diluted antibody in 5% w/v BSA, 1X TBS, 0.1% Tween-20 at 4°C with gentle shaking, overnight.**

**Applications Key:** W—Western 
IP—Immunoprecipitation 
HC—Immunohistochemistry 
CNP—Chromatin Immunoprecipitation 
IF—Immunofluorescence 
F—Flow cytometry 
E-P—ELISA-Peptide

**Species Cross-Reactivity Key:** H—human 
M—mouse 
R—rat 
Hm—hamster 
Mk—monkey 
Mi—mink 
C—chicken 
Dm—D. melanogaster 
X—Xenopus 
Z—zebrafish 
B—bovine 
Sc—S. cerevisiae 
Ce—C. elegans 
Hr—horse 
All—all species expected

Species enclosed in parentheses are predicted to react based on 100% homology.