Revision 1

Store at -20C

#51469

PhosphoPlus® PSD95 (Ser295) Antibody Duet

Cell Signaling TECHNOLOGY®

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For Research Use Only. Not for Use in Diagnostic Procedures.

UniProt ID:	Entrez-Gene Id:
#P78352	1742

Product Includes	Product #	Quantity	Mol. Wt	Isotype/Source
Phospho-PSD95 (Ser295) (A8F8Z) Rabbit mAb	45737	100 µl	95 kDa	Rabbit IgG
PSD95 (D27E11) XP® Rabbit mAb	3450	100 µl	95 kDa	Rabbit IgG

Please visit cellsignal.com for individual component applications, species cross-reactivity, dilutions, protocols, and additional product information.

Description

PhosphoPlus® Duets from Cell Signaling Technology (CST) provide a means to assess protein activation status. Each Duet contains an activation-state and total protein antibody to your target of interest. These antibodies have been selected from CST's product offering based upon superior performance in specified applications.

Storage

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at –20°C. *Do not aliquot the antibody.*

Background

Postsynaptic Density protein 95 (PSD95) is a member of the membrane-associated guanylate kinase (MAGUK) family of proteins. These family members consist of an amino-terminal variable segment followed by three PDZ domains, an SH3 domain, and an inactive guanylate kinase (GK) domain. PSD95 is a scaffolding protein involved in the assembly and function of the postsynaptic density complex (1-2). PSD95 participates in synaptic targeting of AMPA receptors through an indirect manner involving stargazin and related transmembrane AMPA receptor regulatory proteins (TARPs) (3). It is implicated in experience-dependent plasticity and plays an indispensable role in learning (4). Mutations in PSD95 are associated with autism (5).

JNK1 phosphorylates PSD95 at Ser295, enhancing synaptic accumulation of PSD95 and potentiating excitatory post-synaptic currents through PSD95's increased ability to recruit AMPA receptors. In addition, synaptic depression requires dephosphorylation of Ser295 (6).

Background References

1. Cao, J. et al. (2005) *J. Cell Biol* 168, 117-26.
2. Chetkovich, D.M. et al. (2002) *J. Neurosci.* 22, 6415-25.
3. Cai, C. et al. (2006) *J. Biol. Chem.* 281, 4267-73.
4. Yao, W.D. et al. (2004) *Neuron* 41, 625-38.
5. Cline, H. (2005) *Curr. Biol.* 15, R203-5.
6. Kim, M.J. et al. (2007) *Neuron* 56, 488-502.

Trademarks and Patents

Limited Uses

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