

Store at
-20°C

#51469

PhosphoPlus® PSD95 (Ser295) Antibody Duet



Cell Signaling
TECHNOLOGY®

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Entrez-Gene ID #1742
UniProt ID #P78352

New 04/20

For Research Use Only. Not For Use In Diagnostic Procedures.

Products Included	Product #	Quantity	Mol. Wt.	Isotype
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

See www.cellsignal.com for individual component applications, species cross-reactivity, dilutions and additional application protocols.

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.

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).

Specificity/Sensitivity: Phospho-PSD95 (Ser295) (A8F8Z) Rabbit mAb recognizes endogenous levels of PSD95 protein only when phosphorylated at Ser295. PSD95 (D27E11) XP® Rabbit mAb detects endogenous levels of total PSD95 protein.

Source/Purification: Monoclonal antibodies are produced by immunizing animals with a synthetic phosphopeptide corresponding to residues surrounding Ser295 of human PSD95 protein or with a synthetic peptide corresponding to residues surrounding Gln53 of human PSD95 protein.

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.

For product specific protocols and a complete listing of recommended companion products please see the product web page at www.cellsignal.com.

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.

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Applications: W—Western IP—Immunoprecipitation IHC—Immunohistochemistry ChIP—Chromatin Immunoprecipitation IF—Immunofluorescence F—Flow cytometry E-P—ELISA-Peptide **Species Cross-Reactivity:** H—human M—mouse R—rat Hm—hamster Mk—monkey Mi—mink C—chicken Dm—D. melanogaster X—Xenopus Z—zebrafish B—bovine Dg—dog Pg—pig Sc—S. cerevisiae Ce—C. elegans Hr—Horse All—all species expected Species enclosed in parentheses are predicted to react based on 100% homology.