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Phospho-Ser187 SNAP25 Antibody

Affinity purified rabbit polyclonal antibody

Catalog # AN1230

Specification

Phospho-Ser187 SNAP25 Antibody - Product Information

Application	**FC, WB**
Primary Accession	P60881
Reactivity	**Rat**
Predicted	**Human, Mouse, Pig, Monkey, Zebrafish**
Host	**Rabbit**
Clonality	**polyclonal**
Calculated MW	**25 KDa**

Phospho-Ser187 SNAP25 Antibody - Additional Information

Gene ID	**25012**
Gene Name	**SNAP25**

Other Names

Synaptosomal-associated protein 25, SNAP-25, Super protein, SUP, Synaptosomal-associated 25 kDa protein, Snap25, Snap

Target/Specificity

Synthetic phospho-peptide corresponding to amino acid residues surrounding Ser187 conjugated to KLH.

Dilution

FC~~1:500
WB~~ 1:1000

Format

Prepared from rabbit serum by affinity purification via sequential chromatography on phospho- and dephosphopeptide affinity columns.

Antibody Specificity

Specific for the ~25k SNAP25 protein phosphorylated at Ser187 in Western blots. Immunolabeling is completely blocked by blocked λ-Ptase.

Storage

Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions

Phospho-Ser187 SNAP25 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Shipping

Blue Ice

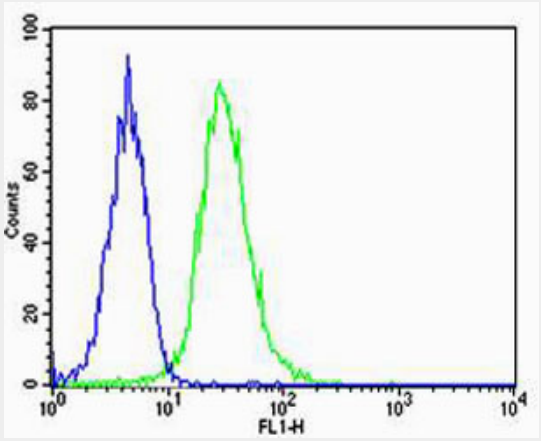
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Phospho-Ser187 SNAP25 Antibody - Protocols

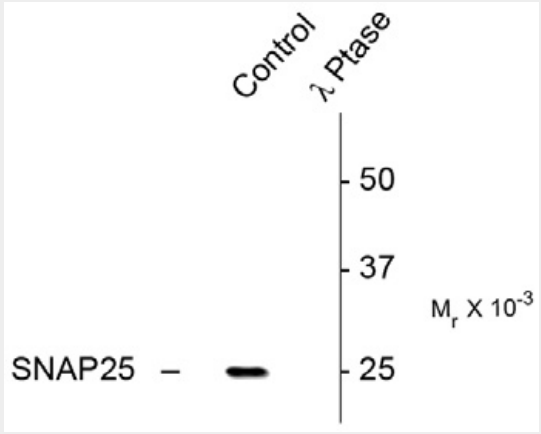
Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

Phospho-Ser187 SNAP25 Antibody - Images



Flow cytometric analysis of U-87 MG cells using Park7 (DJ-1) Antibody(green, Cat#AN1230) compared to an isotype control of rabbit IgG(blue). AN1230 was diluted at 1:500 dilution. An Alexa Fluor® 488 goat anti-rabbit IgG at 1:400 dilution was used as the secondary antibody.



Western blot of rat hippocampal lysate showing specific immunolabeling of the ~25k SNAP25 phosphorylated at Ser187 (Control). Phosphospecificity is shown in the right lane where the signal is completely eliminated by treatment with lambda phosphatase (λ-Ptase, 400 units/100ul lysate for 30 min).

Phospho-Ser187 SNAP25 Antibody - Background

SNAP25 (Synaptosomal associated protein of 25 kDa) is a presynaptic plasma membrane protein that is widely distributed throughout the brain and involved in the regulation of neurotransmitter

release. Decreased levels of SNAP25 have been found in the brains of patients with Down Syndrome and Alzheimer's Disease (Greber et al.,1999). In addition, a significant reduction in the hippocampal expression of SNAP25 has also been found in patients with Schizophrenia (Fatemi et al., 2001). Increasing evidence suggests that SNAP-25 also modulates various ion channels, including voltage gated calcium channels (VGCCs) (Pozzi el al., 2008). Activation of PKC results in the phosphorylation of SNAP-25 on ser187 (Shu et al., 2008). Phosphorylation of SNAP25 on ser187 is believed to cause inhibition of VGCC (Pozzi el al., 2008). Since ser187 phosphorylation is transiently induced by neuronal activity, SNAP25 creates a negative feedback mechanism for controlling neuronal excitability (Pozzi el al., 2008).

Phospho-Ser187 SNAP25 Antibody - References

Ando K, Kudo Y, Takahashi M (2005) Negative regulation of neurotransmitter release by calpain: a possible specific involvement of Snap25 cleavage. J Neurochem 94(3):651-8.
Fatemi SH, Earle JA, Stary JM, Lee S, Sedgwick J (2001) Altered levels of the synaptosomal associated protein Snap25 in hippocampus of patients with mood disorders and Schizophrenia. Neuroreport. 12(15): 3257-62.
Fatemi SH, Sidwell R, Kist D, Akhter P, Meltzer HY, Bailey K, Thuras P, Sedgwick J (1998) Differential expression of synaptosome-associated protein 25 kDa (Snap25) in hippocampi of neonatal mice following exposure to human influenza virus in utero. Brain Res 800(1):1-9.
Greber S, Cairns N, Lubec G, Fountoulakis M (1999) Decreased levels of the synaptosomal associated protein 25 in the brains of patients with Down Syndrome and Alzheimer's Disease. Electrophoresis 20 (4-5):928-34.
Pozzi D, Condliffe S, Bozzi Y, Chikhladze M, Grumelli C, Proux-Gillardeaux V, Takahashi M, Franceschetti S, Verderio C, Matteoli M (2008) Activity-dependent phosphorylation of Ser187 is required for SNAP-25-negative modulation of neuronal voltage-gated calcium channels. PNAS 105: 323-328.
Shu Y, Liu X, Yang Y, Takahashi M, Gillis KD (2008) Phosphorylation of SNAP-25 at Ser187 Mediates Enhancement of Exocytosis by a Phorbol Ester in INS-1 Cells. J of Neurosci 28: 21-30.