

**AKAP5 Antibody (Center) Blocking Peptide**  
**Synthetic peptide**  
**Catalog # BP19171c****Specification**

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**AKAP5 Antibody (Center) Blocking Peptide - Product Information**Primary Accession [P24588](#)**AKAP5 Antibody (Center) Blocking Peptide - Additional Information****Gene ID** 9495**Other Names**

A-kinase anchor protein 5, AKAP-5, A-kinase anchor protein 79 kDa, AKAP 79, H21, cAMP-dependent protein kinase regulatory subunit II high affinity-binding protein, AKAP5, AKAP79

**Format**

Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

**Storage**

Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

**Precautions**

This product is for research use only. Not for use in diagnostic or therapeutic procedures.

**AKAP5 Antibody (Center) Blocking Peptide - Protein Information****Name** AKAP5**Synonyms** AKAP79**Function**

Multivalent scaffold protein that anchors the cAMP-dependent protein kinase/PKA to cytoskeletal and/or organelle-associated proteins, targeting the signal carried by cAMP to specific intracellular effectors (PubMed:<a href="http://www.uniprot.org/citations/1512224" target="\_blank">1512224</a>). Association with the beta2- adrenergic receptor (beta2-AR) not only regulates beta2-AR signaling pathway, but also the activation by PKA by switching off the beta2-AR signaling cascade. Plays a role in long term synaptic potentiation by regulating protein trafficking from the dendritic recycling endosomes to the plasma membrane and controlling both structural and functional plasticity at excitatory synapses (PubMed:<a href="http://www.uniprot.org/citations/25589740" target="\_blank">25589740</a>).

**Cellular Location**

Postsynaptic recycling endosome membrane; Lipid- anchor. Note=Associates with lipid rafts

**Tissue Location**

Predominantly in the cerebral cortex and the postsynaptic densities of the forebrain, and to a

lesser extent in adrenal medulla, lung and anterior pituitary

### **AKAP5 Antibody (Center) Blocking Peptide - Protocols**

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

- [Blocking Peptides](#)

### **AKAP5 Antibody (Center) Blocking Peptide - Images**

### **AKAP5 Antibody (Center) Blocking Peptide - Background**

The A-kinase anchor proteins (AKAPs) are a group of structurally diverse proteins, which have the common function of binding to the regulatory subunit of protein kinase A (PKA) and confining the holoenzyme to discrete locations within the cell. This gene encodes a member of the AKAP family. The encoded protein binds to the RII-beta regulatory subunit of PKA, and also to protein kinase C and the phosphatase calcineurin. It is predominantly expressed in cerebral cortex and may anchor the PKA protein at postsynaptic densities (PSD) and be involved in the regulation of postsynaptic events. It is also expressed in T lymphocytes and may function to inhibit interleukin-2 transcription by disrupting calcineurin-dependent dephosphorylation of NFAT.

### **AKAP5 Antibody (Center) Blocking Peptide - References**

Willoughby, D., et al. J. Biol. Chem. 285(26):20328-20342(2010) Chen, M.H., et al. Cell. Signal. 21(1):136-142(2009) Tavalin, S.J. J. Biol. Chem. 283(17):11445-11452(2008) Correia, S.S., et al. Nat. Neurosci. 11(4):457-466(2008) Chai, S., et al. J. Biol. Chem. 282(31):22668-22677(2007)