

#5671 Store at -20°C

AKAP5 (D28G3) Rabbit mAb



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Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
WB	H	Endogenous	79	Rabbit IgG	#P24588	9495

Product Usage Information

Application

Western Blotting

Dilution

1:1000

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.

Specificity / Sensitivity

AKAP5 (D28G3) Rabbit mAb recognizes endogenous levels of total AKAP5 protein. This antibody does not cross-react with other AKAP family proteins.

Source / Purification

Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Arg383 of human AKAP5 protein.

Background

AKAPs (A-kinase anchoring proteins), as their name implies, are a family of scaffolding proteins that bind regulatory subunits of Protein Kinase A (PKA) thus localizing PKA activity to distinct regions of the cell (1). Beyond a common amphipathic alpha helix that is responsible for recruiting the PKA regulatory subunit (RIα, RIβ, RIIα, or RIIβ), individual AKAPs contain additional domains responsible for the recruitment of additional signaling proteins (phosphodiesterases, phosphatases, cytoskeletal components, other kinases, etc.) or restricting AKAP to a specific subcellular location (1). AKAP5 (also known as P75, AKAP75, or AKAP79) is predominantly expressed in neuronal tissues and cells where it serves to localize type II PKA to post-synaptic densities (2-4). AKAP5 specifically binds to the regulatory subunit of PKAIIβ, anchoring the enzyme to the plasma membrane and sites of cytoskeletal/membrane junctions (4-5). The other binding domains of AKAP5 have been shown to interact with calmodulin, PP2B, and calcineurin suggesting that AKAP5 may act to coordinate the cAMP- and Ca²⁺-sensing pathways in various cell types (5-8).

Background References

- Schwartz, J.H. (2001) *Proc Natl Acad Sci U S A* 98, 13482-4.
- Bregman, D.B. et al. (1991) *J Biol Chem* 266, 7207-13.
- Hirsch, A.H. et al. (1992) *J Biol Chem* 267, 2131-4.
- Carr, D.W. et al. (1992) *J Biol Chem* 267, 16816-23.
- Glantz, S.B. et al. (1993) *J Biol Chem* 268, 12796-804.
- Klauck, T.M. et al. (1996) *Science* 271, 1589-92.
- Sarkar, D. et al. (1984) *J Biol Chem* 259, 9840-6.
- Coghlan, V.M. et al. (1995) *Science* 267, 108-11.

Species Reactivity

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

Western Blot Buffer

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

Applications Key

WB: Western Blotting

Cross-Reactivity Key

H: human **M:** mouse **R:** rat **Hm:** hamster **Mk:** monkey **Vir:** virus **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 **GP:** Guinea Pig **Rab:** rabbit **All:** all species expected

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