

#4155 Store at -20C

EPAC1 (5D3) Mouse mAb



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Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
WB	H M R	Endogenous	100	Mouse IgG2a	#O95398	10411

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

Epac1 (5D3) Mouse mAb detects endogenous levels of total Epac1 protein.

Source / Purification

Monoclonal antibody is produced by immunizing animals with a recombinant fragment of human Epac1.

Background

EPAC1 and EPAC2 (exchange proteins activated by cyclic AMP) are guanine nucleotide exchange factors (GEFs) that catalyze the exchange of GDP for GTP, activating Rap1 and Rap2 small GTPases. Rap activation by EPAC is cAMP-dependent and mediates cAMP signaling in part through protein kinase A (PKA) (reviewed in 1). EPAC signaling plays a significant role in a number of cellular processes including migration and focal adhesion formation (2), exocytosis (3), insulin signaling (4), axon growth and guidance (5) and neurotransmitter release (6).

Background References

1. Bos, J.L. (2006) *Trends Biochem Sci* 31, 680-6.
2. Lyle, K.S. et al. (2008) *Cell Signal* 20, 1104-16.
3. Branham, M.T. et al. (2009) *J Biol Chem* 284, 24825-39.
4. Petersen, R.K. et al. (2008) *Mol Cell Biol* 28, 3804-16.
5. Murray, A.J. and Shewan, D.A. (2008) *Mol Cell Neurosci* 38, 578-88.
6. Ouyang, M. et al. (2008) *Proc Natl Acad Sci USA* 105, 11993-7.

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 nonfat dry milk, 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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