Revision 1

Store at -20C

#42480

FEZ1 (D9R8Q) Rabbit mAb

Cell Signaling TECHNOLOGY®

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For Research Use Only. Not for Use in Diagnostic Procedures.

Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
W, IP	H M R	Endogenous	65	Rabbit IgG	#Q99689	9638

Product Usage Information

Application	Dilution
Western Blotting	1:1000
Immunoprecipitation	1:100

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

FEZ1 (D9R8Q) Rabbit mAb recognizes endogenous levels of total FEZ1 protein.

Source / Purification

Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues near the amino terminus of human FEZ1 protein.

Background

The coiled-coil containing protein fasciculation and elongation protein zeta-1 (FEZ1) is expressed predominately in the brain and is the mammalian ortholog of the *C. elegans* protein UNC-76. It was identified independently in several interaction screens using distinct baits and was shown to play a role in neuronal differentiation and outgrowth, viral defense, centrosome organization, cytoskeletal signaling, and autophagy (reviewed in 1). It was originally identified as a binding partner and substrate for PKCζ and was found to induce the neuronal differentiation of PC-12 cells when co-expressed with active PKCζ (2). FEZ1 was also found to be an interacting partner with the schizophrenia-associated protein DISC1, which may suggest a role for FEZ1 in schizophrenia as well as other mental disorders (3,4). FEZ1 has also been shown to bind to several cytoskeletal proteins, including kinesins, tubulins, JIP1, NEK1, and CLASP2, which supports its role in neurite outgrowth, cargo transport along microtubules, and centrosomal organization (5-7). Additional research studies have shown that FEZ1 interacts with a viral agnoprotein and plays a role in viral defense, including during HIV-1 infection (8-10). Another screen identified FEZ1 as a binding partner for the ubiquitin ligase E4B and showed that FEZ1 can be regulated through polyubiquitination (11). Moreover, degradation of FEZ1 by the ubiquitination-proteasomal pathway through cdc20 provides a mechanism for FEZ1 in dendritic outgrowth (12). FEZ1 was also found to regulate autophagy through association with ULK1 and Beclin-1 complexes (13).

Background References

1. Maturana, A.D. et al. (2010) *ScientificWorldJournal* 10, 1646-54.
2. Kuroda, S. et al. (1999) *J Cell Biol* 144, 403-11.
3. Miyoshi, K. et al. (2003) *Mol Psychiatry* 8, 685-94.
4. Kang, E. et al. (2011) *Neuron* 72, 559-71.
5. Fujita, T. et al. (2007) *Biochem Biophys Res Commun* 361, 605-10.
6. Blasius, T.L. et al. (2007) *J Cell Biol* 176, 11-7.
7. Lanza, D.C. et al. (2010) *Mol Cell Biochem* 338, 35-45.
8. Suzuki, T. et al. (2005) *J Biol Chem* 280, 24948-56.
9. Naghavi, M.H. et al. (2005) *Genes Dev* 19, 1105-15.
10. Haedicke, J. et al. (2009) *Proc Natl Acad Sci U S A* 106, 14040-5.
11. Okumura, F. et al. (2004) *J Biol Chem* 279, 53533-43.
12. Watanabe, Y. et al. (2014) *Cell Rep* 7, 552-64.
13. McKnight, N.C. et al. (2012) *EMBO J* 31, 1931-46.

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

W: Western Blotting **IP:** Immunoprecipitation

Cross-Reactivity Key

H: Human **M:** Mouse **R:** Rat

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