Revision 1

Store at -20C

#13013

Spry1 (D9V6P) Rabbit mAb

Cell Signaling TECHNOLOGY®

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Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
W, IP	H M R	Endogenous	35	Rabbit IgG	#O43609	10252

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

Spry1 (D9V6P) Rabbit mAb recognizes endogenous levels of total Spry1 protein.

Source / Purification

Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Arg70 of human Spry1 protein.

Background

Spry1 is a member of the Sprouty (Spry) family proteins that was initially identified in *Drosophila* as an inhibitor of the FGF signaling pathway (1). There are four human Spry proteins (Spry1-4), encoded by different genes, and they all share a highly conserved carboxy-terminal cystine-rich Spry domain that is known to be essential for their receptor tyrosine kinase inhibitory function stimulated by various growth factors (1-3). Spry1 and other Spry proteins play a key role in embryonic development, tissue and organ formation, as well as growth in almost all living organisms (1-4). Spry proteins are considered tumor suppressors due to their inhibitory function in a variety of growth factor signaling pathways (2,3). Spry1 anchors itself to the membrane by palmitoylation and can translocate from the cytosol to the membrane by binding to caveolin-1 (5,6). Regulation of Spry1 protein function is thought to occur at various levels. Spry1 regulation includes transcriptional regulation by growth factors and kinases (1,4,7), post-transcriptional regulation by microRNA-21 (8), post-translational modifications including phosphorylation, dephosphorylation, ubiquitination and proteasomal degradation, and regulation by its interacting protein partners (2,3).

Background References

1. Hacohen, N. et al. (1998) *Cell* 92, 253-63.
2. Edwin, F. et al. (2009) *Mol Pharmacol* 76, 679-91.
3. Guy, G.R. et al. (2009) *J Endocrinol* 203, 191-202.
4. Minowada, G. et al. (1999) *Development* 126, 4465-75.
5. Impagnatiello, M.A. et al. (2001) *J Cell Biol* 152, 1087-98.
6. Hanafusa, H. et al. (2002) *Nat Cell Biol* 4, 850-8.
7. Ozaki, K. et al. (2001) *Biochem Biophys Res Commun* 285, 1084-8.
8. Thum, T. et al. (2008) *Nature* 456, 980-4.

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

W: Western Blotting **IP:** Immunoprecipitation

Cross-Reactivity Key

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

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Limited Uses

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