Revision 1

Store at -20C

#14954

Spry2 (D3G1A) 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	#O43597	10253

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

Spry2 (D3G1A) Rabbit mAb recognizes endogenous levels of total Spry2 protein.

Source / Purification

Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Pro71 of human Spry2 protein.

Background

The Sprouty (Spry) family of proteins are antagonists of receptor tyrosine kinase (RTK)-induced signaling (1, 2). The Spry proteins play crucial roles in regulating growth and development of living organisms. Since originally discovered in *Drosophila*, four human orthologs of Spry proteins (Spry1-4) have been identified. All human Spry proteins possess a conserved carboxyl-terminal cysteine-rich SPR domain, which harbors a signal for protein translocation from cytosol to membrane ruffles (3,4). The SPR domain also enables the Spry proteins to form homo- or hetero-dimers and to interact with other proteins including kinases and phosphatases. The SPR domain is essential for the inhibitory modulation of Spry proteins on RTK signaling (1,2).
Studies have shown that several cancers have reduced levels of Spry2 expression implicating Spry2 as a tumor suppressor (5-8). The regulation of Spry2 expression and activity appears to be a complex process involving casein kinase 1, Shp2 phosphatase, and Spry2-interacting partners (9-11). Phosphorylation of Tyr55 residue of Spry2 is required for the inhibitory function of Spry2 in FGF/MAPK signaling (12,13).

Background References

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7. Sánchez, A. et al. (2008) *Oncogene* 27, 4969-72.
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11. Mason, J.M. et al. (2004) *Mol Biol Cell* 15, 2176-88.
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13. Fong, C.W. et al. (2003) *J Biol Chem* 278, 33456-64.

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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