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Spred1 Antibody

Catalog # ASC10778

Product Information

Application	WB, E, IHC-P
Primary Accession	Q7Z699
Other Accession	NP_689807, 22749221
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Calculated MW	50477
Concentration (mg/ml)	1 mg/mL
Conjugate	Unconjugated
Application Notes	Spred1 antibody can be used for detection of Spred1 by Western blot at 1 - 2 g/mL. Antibody can also be used for immunohistochemistry starting at 2.5 g/mL.

Additional Information

Gene ID	161742
Other Names	Sprouty-related, EVH1 domain-containing protein 1, Spred-1, hSpred1, SPRED1
Target/Specificity	SPRED1;
Reconstitution & Storage	Spred1 antibody can be stored at 4℃ for three months and -20℃, stable for up to one year. As with all antibodies care should be taken to avoid repeated freeze thaw cycles. Antibodies should not be exposed to prolonged high temperatures.
Precautions	Spred1 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	SPRED1
Function	Tyrosine kinase substrate that inhibits growth-factor- mediated activation of MAP kinase (By similarity). Negatively regulates hematopoiesis of bone marrow (By similarity). Inhibits fibroblast growth factor (FGF)-induced retinal lens fiber differentiation, probably by inhibiting FGF-mediated phosphorylation of ERK1/2 (By similarity). Attenuates actin stress fiber formation via inhibition of TESK1-mediated phosphorylation of cofilin (PubMed:18216281). Inhibits TGFB-induced epithelial-to-mesenchymal transition in lens epithelial cells (By similarity).

Cellular Location	Cell membrane; Peripheral membrane protein. Membrane, caveola; Peripheral membrane protein. Nucleus Note=Localized in cholesterol-rich membrane raft/caveola fractions
Tissue Location	Weakly expressed in embryonic cell line HEK293.

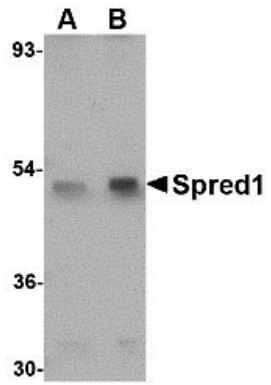
Background

Spred1 Antibody: The Ras-MAP kinase pathway is essential for the differentiation of neuronal cells and myocytes; it is inhibited by Spred1, a member of the Sprouty family of proteins. Spred1 acts by suppressing the phosphorylation and activation of Raf. The Spred proteins have also been implicated in the negative feedback regulation of FGF signaling in embryogenesis and angiogenesis. Further studies have shown that expression levels of Spred1 and Spred2 proteins are inversely correlated with the incidence of tumor invasion and metastasis in human hepatocellular carcinoma (HHC), suggesting that these proteins could be useful as prognostic factors and therapeutic targets in HCC. Defects in this gene are a cause of neurofibromatosis type 1-like syndrome (NFLS). This Spred1 antibody is predicted to have no cross-reactivity to Spred2 or Spred3.

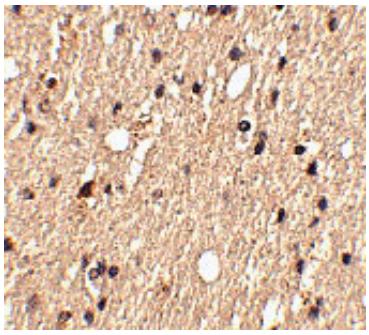
References

Wakioka T, Sasaki A, Kato R, et al. Spred is a Sprouty-related suppressor of Ras signalling. Nature2001; 412:647-51.
Minowada G, Jarvis LA, Chi CL, et al. Vertebrate Sprouty genes are induced by FGF signaling and can cause chondrodysplasia when overexpressed. Development1999; 126:4465-75.
Lee SH, Schloss DJ, Jarvis L, et al. Inhibition of angiogenesis by a mouse sprouty protein. J. Biol. Chem.2001; 276:4128-33.
Yoshida T, Hisamoto T, Akiba J, et al. Spreds, inhibitors of the Ras/ERK signal transduction, are dysregulated in human hepatocellular carcinoma and linked to the malignant phenotype of tumors. Oncogene2006; 25:6056-66.

Images



Western blot analysis of Spred1 in mouse brain tissue lysate with Spred1 antibody at (A) 1 and (B) 2 µg/mL.



Immunohistochemistry of Spred1 in human brain tissue with Spred1 antibody at 2.5 µg/mL.