

**SHOC2 Antibody**  
**Catalog # ASC10921****Specification**

---

**SHOC2 Antibody - Product Information**

Application	WB, IHC
Primary Accession	<a href="#">O9UQ13</a>
Other Accession	<a href="#">NP_031399</a> , <a href="#">41281398</a>
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Application Notes	SHOC2 antibody can be used for detection of Shoc2 by Western blot at 1-2 µg/mL. Antibody can also be used for immunohistochemistry starting at 5 µg/mL.

**SHOC2 Antibody - Additional Information**

Gene ID	8036
Target/Specificity	
SHOC2;	

**Reconstitution & Storage**

SHOC2 antibody can be stored at 4°C for three months and -20°C, 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**

SHOC2 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

**SHOC2 Antibody - Protein Information**

**Name** SHOC2

**Synonyms** KIAA0862

**Function**

Regulatory subunit of protein phosphatase 1 (PP1c) that acts as a M-Ras/MRAS effector and participates in MAPK pathway activation. Upon M-Ras/MRAS activation, targets PP1c to specifically dephosphorylate the 'Ser-259' inhibitory site of RAF1 kinase and stimulate RAF1 activity at specialized signaling complexes.

**Cellular Location**

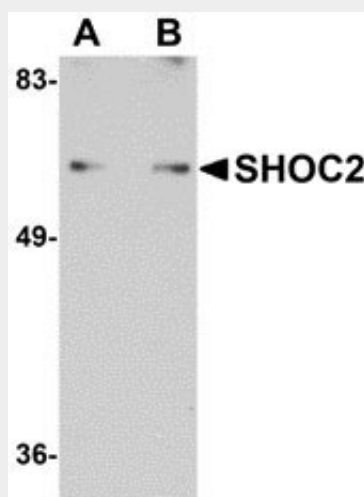
Cytoplasm. Nucleus. Note=Translocates from cytoplasm to nucleus upon growth factor stimulation.

## SHOC2 Antibody - Protocols

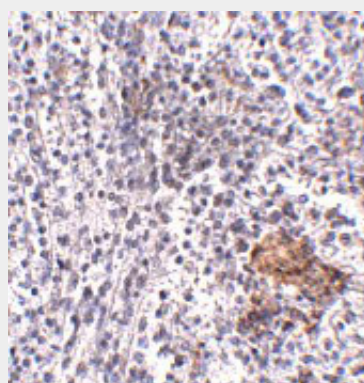
Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

## SHOC2 Antibody - Images



Western blot analysis of SHOC2 in Jurkat cell lysate with SHOC2 antibody at (A) 1 and (B) 2  $\mu\text{g/mL}$ .



Immunohistochemistry of SHOC2 in human spleen tissue with SHOC2 antibody at 5  $\mu\text{g/mL}$ .

## SHOC2 Antibody - Background

SHOC2 Antibody: SHOC2 protein participates in protein binding / transferase activity in the fibroblast growth factor receptor signaling pathway and Ras protein signal transduction. It is a widely expressed protein composed almost entirely of leucine-rich repeats (LRR), with a lysine-rich sequence at the amino terminus and cytoplasmically localized. SHOC2 acts as a positive modulator

of the RAS-MAPK signaling cascade, which is elicited by EGL-15 and LET-23 and mediated by LET-60. SHOC2 together with protein phosphatase 1c (PP1c) forms a highly specific M-Ras effector complex and is essential for activation of the MAPK pathway by growth factors. Furthermore, in tumor cells with Ras gene mutations, inhibition of SHOC2 expression inhibits MAPK, but not PI3K activity. The SHOC2-PP1c holoenzyme provides an attractive therapeutic target for inhibition of the MAPK pathway in cancer. Recent studies show that aberrantly acquired N-myristoylation of SHOC2 causes human disease Noonan-like syndrome with loose anagen hair.

### **SHOC2 Antibody - References**

Selfors LM, Schutzman JL, Borland CZ, et al. Soc-2 encodes a leucine-rich repeat protein implicated in fibroblast growth factor receptor signaling. *Proc. Natl. Acad. Sci. USA*1998; 95:6903-8.

Sieburth DS, Sun Q, and Han M. SUR-8, a conserved Ras-binding protein with leucine-rich repeats, positively regulates Ras-mediated signaling in *C. elegans*. *Cell*1998; 94:119-130.

Rodriguez-Viciano P, Oses-Prieto J, Burlingame A, et al. A phosphatase holoenzyme comprised of Shoc2/Sur8 and the catalytic subunit of PP1 functions as an M-Ras effector to modulate Raf activity. *Mol. Cell*2006; 22:217-30.

Li W, Han M, and Guan KL. The leucine-rich repeat protein SUR-8 enhances MAP kinase activation and forms a complex with Ras and Raf. *Genes Dev.*2000; 14:895-900.