

SHOC2 Antibody

SHOC2: Leucine-rich repeat protein SHOC-2, Ras-binding protein Sur-8, SOC2

CATALOG No.: 5215

Background:

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 (1). 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 (2,3). 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 (4). Recent studies show that aberrantly acquired N-myristoylation of SHOC2 causes human disease Noonan-like syndrome with loose anagen hair (5).

SOURCE:

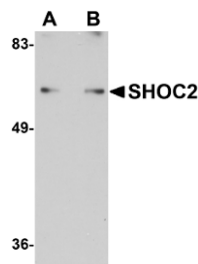
Rabbit polyclonal SHOC2 antibody was raised against a 21 amino acid peptide near the amino terminus of human SHOC2 (GenBank accession no. NP_031399).

APPLICATION:

SHOC2 antibody can be used for detection of Shoc2 by Western blot at 1-2 µg/ml. (Optimal dilution should be determined by user.) Jurkat Cell Lysate can be used as positive control. SHOC2 antibody is human, mouse and rat reactive. **For research use only.**

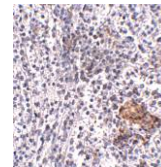
STORAGE:

SHOC2 antibody is supplied as immunoaffinity purified IgG in PBS containing 0.02% sodium azide. Store at 4°C, stable for one year.



Western blot analysis of SHOC2 in Jurkat cell lysate with SHOC2 antibody at (A) 1 and (B) 2 µg/ml.

Immunohistochemistry of SHOC2 in human spleen tissue with SHOC2 antibody at 5 µg/ml.



RELATED PRODUCTS:

Blocking Peptide, Catalog No. **5215P**.
Jurkat Cell Lysate, Catalog No. **1205**.
MAPKAP1 Antibody (NT), Catalog No. **4077**.
Mipu1 Antibody, Catalog No. **5219**.
Spred1 Antibody (IN), Catalog No. **4833**.

REFERENCES:

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2. 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.
3. 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.
4. 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.
5. Cordeddu V, Di Schiavi, Pennachio LA, et al. Mutation of SHOC2 promotes aberrant protein N-myristoylation and causes Noonan-like syndrome with loose anagen hair. *Nat. Genet.* 2009; 41:1022-6.

(09-01D)