Revision 4

Store at -20C

#53600

SHOC2 (D7N1A) Rabbit mAb

Cell Signaling TECHNOLOGY®

Orders: 877-616-CELL (2355)
orders@cellsignal.com

Support: 877-678-TECH (8324)

Web: info@cellsignal.com
cellsignal.com

3 Trask Lane | Danvers | Massachusetts | 01923 | USA

For Research Use Only. Not for Use in Diagnostic Procedures.

Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:
W, W-S	H M R Mk	Endogenous	64	Rabbit IgG

Product Usage Information

Application	Dilution
Western Blotting	1:1000
Simple Western™	1:10 - 1:50

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

SHOC2 (D7N1A) Rabbit mAb recognizes endogenous levels of total SHOC2 protein.

Species predicted to react based on 100% sequence homology

Chicken, Bovine, Dog

Source / Purification

Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues near the carboxy terminus of human SHOC2 protein.

Background

SHOC2 is a scaffolding protein that harbors multiple leucine-rich repeats in tandem and is an upstream positive regulator of growth factor-dependent MAPK/ERK signaling. Research studies have demonstrated that SHOC2 forms a complex with the catalytic subunit of the PP1 phosphatase and M-Ras, and this complex drives activation of Raf-ERK signaling in response to mitogenic growth factors (1). SHOC2 has also been shown to cross-talk with and activate the PI3K/Akt signaling axis through its interaction with the p110α catalytic subunit of PI3K (2). As a positive regulator of ERK and PI3K/Akt signaling cascades, SHOC2 has been implicated in the regulation of several oncogenic cellular processes such as cell motility, invasion, and metastasis (2). A mutation in *SHOC2* that introduces an N-terminal myristoylation site, promotes aberrant membrane targeting of SHOC2, hyperactive MAPK/ERK signaling, and Noonan-like syndrome (3).

Background References

1. Rodriguez-Viciana, P. et al. (2006) *Mol Cell* 22, 217-30.
2. Kaduwal, S. et al. (2015) *Oncotarget* 6, 33091-105.
3. Cordeddu, V. et al. (2009) *Nat Genet* 41, 1022-6.

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 **W-S:** Simple Western™

Cross-Reactivity Key

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

Trademarks and Patents

Limited Uses

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