Sin1 (D7G1A) Rabbit mAb

#12860 Store at -20°C

☑ 100 µl
(10 western blots)

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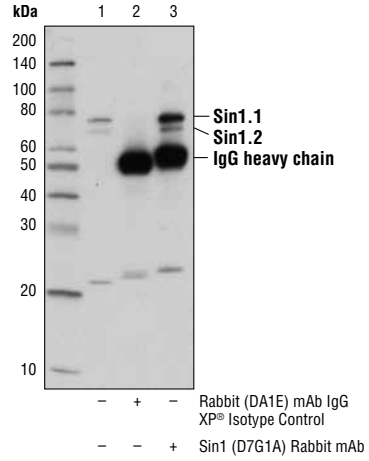
Entrez Gene ID #79109
UniProt ID #Q9BPZ7

Applications	Species Cross-Reactivity*	Molecular Wt.	Isotype
W, IP Endogenous	H, R, Mk	78, 74 kDa	Rabbit IgG**

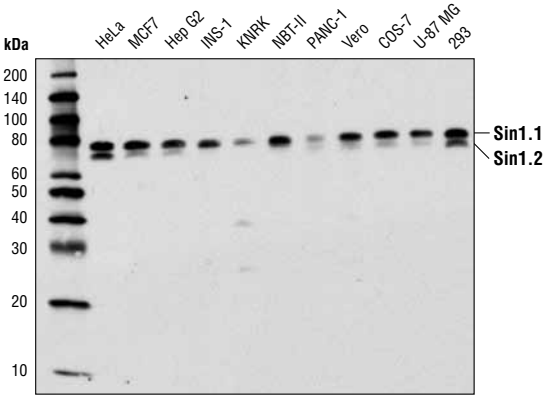
Background: Cell growth is a fundamental biological process whereby cells accumulate mass and increase in size. The mammalian TOR (mTOR) pathway regulates growth by coordinating energy and nutrient signals with growth factor-derived signals (1). mTOR is a large protein kinase that is a component of two different complexes. The mTOR complex 1 (mTORC1), a target of rapamycin, contains mTOR, GβL, and raptor. mTORC2, insensitive to rapamycin, includes mTOR, GβL, Sin1, and rictor (1). The mTORC2 complex phosphorylates Ser473 of Akt/PKB *in vitro* (2). This phosphorylation is essential for full Akt/PKB activation. Furthermore, an siRNA knockdown of rictor inhibits Ser473 phosphorylation in 3T3-L1 adipocytes (3). mTORC2 has also been shown to phosphorylate the rapamycin-resistant mutants of S6K1, another effector of mTOR (4). In addition, phosphorylation of Sin1 at Thr86 by Akt/PKB was shown to regulate the activity of mTORC2 in adipocytes upon stimulation by growth factors (5).

Specificity/Sensitivity: Sin1 (D7G1A) Rabbit mAb recognizes endogenous levels of total Sin1 protein, including isoforms Sin1.1 and Sin1.2.

Source/Purification: Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues near the carboxy terminus of human Sin1 protein.



Immunoprecipitation of Sin1 from Hep G2 cell extracts using Rabbit (DA1E) mAb IgG XP® Isotype Control #3900 (lane 2) or Sin1 (D7G1A) Rabbit mAb (lane 3). Lane 1 is 10% input. Western blot analysis was performed using Sin1 (D7G1A) Rabbit mAb.



Western blot analysis of extracts from various cell lines using Sin1 (D7G1A) Rabbit mAb.

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.*

***Species cross-reactivity is determined by western blot.**

****Anti-rabbit secondary antibodies must be used to detect this antibody.**

Recommended Antibody Dilutions:

Western blotting	1:1000
Immunoprecipitation	1:50

For product specific protocols please see the web page for this product at www.cellsignal.com.

Please visit www.cellsignal.com for a complete listing of recommended complementary products.

Background References:

(1) Sarbassov, D.D. et al. (2004) *Curr Biol* 14, 1296-302.

(2) Sarbassov, D.D. et al. (2005) *Science* 307, 1098-101.

(3) Hresko, R.C. and Mueckler, M. (2005) *J Biol Chem* 280, 40406-16.

(4) Ali, S.M. and Sabatini, D.M. (2005) *J Biol Chem* 280, 19445-8.

(5) Humphrey, S.J. et al. (2013) *Cell Metab* 17, 1009-20.

IMPORTANT: For western blots, incubate membrane with diluted antibody in 5% w/v nonfat dry milk, 1X TBS, 0.1% Tween-20 at 4°C with gentle shaking, overnight.

Applications Key: **W**—Western **IP**—Immunoprecipitation **IHC**—Immunohistochemistry **ChIP**—Chromatin Immunoprecipitation **IF**—Immunofluorescence **F**—Flow cytometry **E-P**—ELISA-Peptide
Species Cross-Reactivity Key: **H**—human **M**—mouse **R**—rat **Hm**—hamster **Mk**—monkey **Mi**—mink **C**—chicken **Dm**—D. melanogaster **X**—Xenopus **Z**—zebrafish **B**—bovine **Dg**—dog **Pg**—pig **Sc**—S. cerevisiae **Ce**—C. elegans **Hr**—horse **All**—all species expected Species enclosed in parentheses are predicted to react based on 100% homology.