

Phospho-FoxO1 (Ser319)/FoxO4 (Ser262) Antibody

✓ 100 µl
(10 Western mini-blot)

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This product is for *in vitro* research use only and is not intended for use in humans or animals.
This product is not intended for use as a therapeutic or in diagnostic procedures.

Entrez-Gene ID # 2308
Swiss-Prot Acc. # Q12778

Applications	Species Cross-Reactivity*	Molecular Wt.	Source
W Endogenous	H	65 kDa (FoxO4) 120 kDa (GFP-FoxO1)	Rabbit**

Background: The Forkhead family of transcription factors is involved in tumorigenesis in rhabdomyosarcoma and acute leukemias (1–3). Within the family, three members (FoxO1, FoxO4 and FoxO3a) have sequence similarity to the nematode orthologue DAF-16, which mediates signaling via a pathway involving IGF1R, PI3K and Akt (4–6). There are three Akt phosphorylation sites in the FoxO1 proteins: Thr24, Ser256 and Ser319. Phosphorylation of FoxO family members at these sites by Akt promotes cell survival and regulates the cell cycle. Phosphorylation of FoxO proteins regulates their nuclear translocation and target gene transcription (7,8).

Specificity/Sensitivity: Phospho-FoxO1 (Ser319)/FoxO4 (Ser262) Antibody detects exogenous levels of FoxO1 only when phosphorylated at serine 319 and exogenous levels of FoxO4 only when phosphorylated at serine 262. The antibody does not cross-react with FoxO1 phosphorylated at other sites, FoxO4 phosphorylated at other sites nor with FoxO3a phosphorylated at any sites.

Source/Purification: Polyclonal antibodies are produced by immunizing animals with a synthetic phosphopeptide (KLH-coupled) corresponding to residues surrounding Ser319 of human FoxO1. Antibodies are purified by protein A and peptide affinity chromatography.

SStorage: Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA and 50% glycerol. 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:

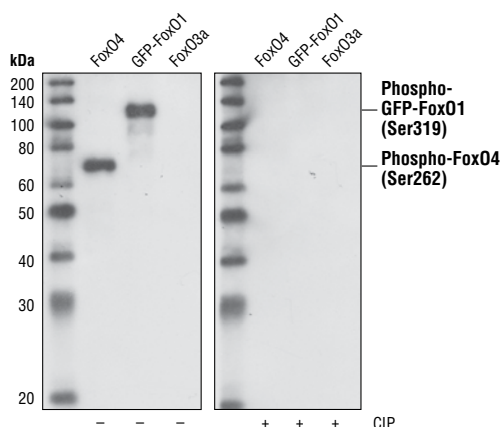
Western blotting 1:1000

For application 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 companion products.

Background References:

- (1) Anderson, M.J. et al. (1998) *Genomics* 47, 187–199.
- (2) Galili, N. et al. (1993) *Nat. Genet.* 5, 230–235.
- (3) Borkhardt, A. et al. (1997) *Oncogene* 14, 195–202.
- (4) Nakae, J. et al. (1999) *J. Biol. Chem.* 274, 15982–15985.
- (5) Rena, G. et al. (1999) *J. Biol. Chem.* 274, 17179–17183.
- (6) Guo, S. et al. (1999) *J. Biol. Chem.* 274, 17184–17192.
- (7) Brunet, A. et al. (1999) *Cell* 96, 857–868.
- (8) Medema, R.H. (2000) *Nature* 404, 782–787.



Western blot analysis of extracts from serum-treated COS-7 cells exogenously expressing FoxO4 or FoxO3a, using Phospho-FoxO1 (Ser319)/FoxO4 (Ser262) Antibody. The phospho-specificity of the antibody was verified by treating the membrane with (+) or without (-) calf intestinal phosphatase (CIP) after western transfer.

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