

Phospho-FoxO1 (Ser319) Antibody

100 μ l
 (10 western blots)

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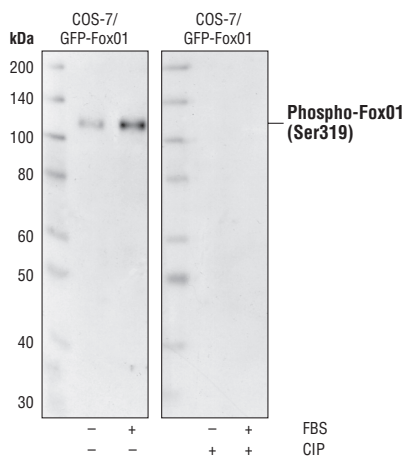
This product is intended for research purposes only. This product is not intended to be used for therapeutic or diagnostic purposes in humans or animals.

Applications	Species Cross-Reactivity*	Source
W Transfected	H	Rabbit**

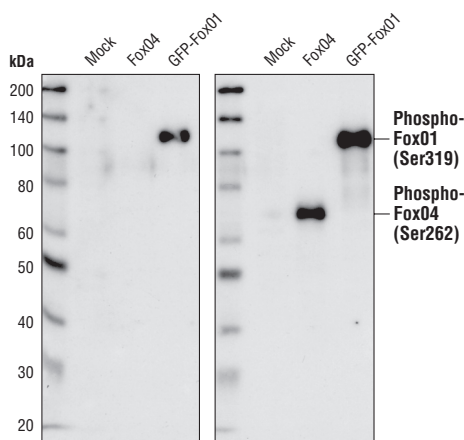
Background: The Forkhead family of transcription factors is involved in tumorigenesis in rhabdomyosarcoma and acute leukemias (1–3). Within the family, three members (FoxO1, FoxO4 and FoxO3a) have sequence similarity to the nematode orthologue DAF-16, which mediates signaling via a pathway involving IGF1R, PI3K and Akt (4–6). There are three Akt phosphorylation sites in the FoxO 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) Antibody detects exogenous levels of FoxO1 only when phosphorylated at serine 319. The antibody does not cross-reacts with FoxO1 phosphorylated at other sites nor with other phosphorylated family members.

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



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



Western blot analysis of extracts from serum-treated COS-7 cells untransfected, exogenously expressing FoxO4 or GFP-FoxO1, using Phospho-FoxO1 (Ser319) (left) or Phospho-FoxO1 (Ser319)/FoxO4 (Ser262) Antibody (#2487) (right).

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

Storage: Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 μ g/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.

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.