

# p-WT (Ser 393): sc-12934

## BACKGROUND

Wilms' tumor (WT) is an embryonal malignancy of the kidney that affects one in 10,000 infants and, like retinoblastoma, is observed in both sporadic and inherited forms. The Wilms' tumor locus has been mapped to chromosome 11p13 as a tumor suppressor gene, which encodes a DNA binding protein with four zinc fingers and a glutamine-proline rich amino terminus. The Wilms' tumor protein binds the DNA sequence GCGGGGCG, a recognition element common to the early growth response (Egr) family of zinc finger transcriptional activators. Forskolin activated PKA phosphorylates WT1 in its zinc finger domain at Ser 365 and Ser 393, which lie in zinc fingers two and three, respectively. Phosphorylation of both residues inhibits WT1 from binding DNA, resulting in a decrease in WT1 transcriptional repression.

## REFERENCES

1. Matsunaga, E. 1981. Genetics of Wilms' tumor. *Hum. Genet.* 57: 231-246.
2. Gessler, M., et al. 1990. Homozygous deletion in Wilms' tumours of a zinc-finger gene identified by chromosome jumping. *Nature* 343: 774-778.
3. Call, K.M., et al. 1990. Isolation and characterization of a zinc finger polypeptide gene at the human chromosome 11 Wilms' tumor locus. *Cell* 60: 509-520.
4. Little, M.H., et al. 1992. Zinc finger point mutations within the WT1 gene in Wilms' tumor patients. *Proc. Natl. Acad. Sci. USA* 89: 4791-4795.
5. Drummond, I.A., et al. 1992. Repression of the Insulin-like growth factor II gene by the Wilms' tumor suppressor WT1. *Science* 257: 674-678.
6. Sakamoto, Y., et al. 1997. Inhibition of the DNA-binding and transcriptional repression activity of the Wilms' tumor gene product, WT1, by cAMP-dependent protein kinase-mediated phosphorylation of Ser 365 and Ser 393 in the zinc finger domain. *Oncogene* 15: 2001-2012.

## CHROMOSOMAL LOCATION

Genetic locus: WT1 (human) mapping to 11p13; Wt1 (mouse) mapping to 2 E3.

## SOURCE

p-WT (Ser 393) is available as either goat (sc-12934) or rabbit (sc-12934-R) polyclonal affinity purified antibody raised against a short amino acid sequence containing Ser 393 phosphorylated WT of human origin.

## PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-12934 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

Available as TransCruz reagent for Gel Supershift and ChIP applications, sc-12934 X, 200 µg/0.1 ml.

## STORAGE

Store at 4° C, **\*\*DO NOT FREEZE\*\***. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

## APPLICATIONS

p-WT (Ser 393) is recommended for detection of Ser 393 phosphorylated Wilms' tumor (WT1), Egr-1, 2 and Krüppel-like factor 3, 5 and 12 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

p-WT (Ser 393) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: for goat primary antibody (sc-12934): use donkey anti-goat IgG-HRP: sc-2020 (range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (range: 1:2000-1:5000), for rabbit primary antibody (sc-12934-R): use goat anti-rabbit IgG-HRP: sc-2004 (range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (range: 1:2000-1:5000); Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto B Blocking Reagent: sc-2335 (use 50 mM NaF, sc-24988, as diluent), Western Blotting Luminol Reagent: sc-2048 and Lambda Phosphatase: sc-200312A. 2) Immunofluorescence: for goat primary antibody (sc-12934): use donkey anti-goat IgG-FITC: sc-2024 (range: 1:100-primary antibody (sc-12934-R): use goat anti-rabbit IgG-FITC: sc-2012 (range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

## SELECT PRODUCT CITATIONS

1. Graham, D.L., et al. 2007. Dynamic BDNF activity in nucleus accumbens with cocaine use increases self-administration and relapse. *Nat. Neurosci.* 10: 1029-1037.

## RESEARCH USE

For research use only, not for use in diagnostic procedures.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.