SANTA CRUZ BIOTECHNOLOGY, INC.

p-WT (Ser 363): sc-12933

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Wilms' tumor (WT) is an embryonal malignancy of the kidney that affects 1 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 GCGGGGGCG, 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 2 and 3, 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 transcritional 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 E.

SOURCE

p-WT (Ser 363) is available as either goat (sc-12933) or rabbit (sc-12933-R) polyclonal affinity purified antibody raised against a short amino acid sequence containing phosphorylated Ser 363 of 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-12933 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-12933 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 363) is recommended for detection of Ser 363 phosphorylated Wilms' tumor (WT1), Egr-1,2,3 and Kruppel-like factor 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 363) 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: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution 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) and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

RESEARCH USE

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

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.