SANTA CRUZ BIOTECHNOLOGY, INC.

WTX (K-14): sc-138079

BACKGROUND

WTX (Wilms tumor on the X), also known as OSCS, AMER1 or FAM123B, is a 1,135 amino acid protein that shuttles between the nucleus and cytoplasm and is a member of the FAM123 family. WTX is expressed in fetal and adult kidney, brain and spleen, and exists as two alternatively spliced isoforms. WTX is responsible for enhanced transcription activation by WT1 (Wilms tumor 1) and promotes β-catenin ubiquitination and degradation. Involved in kidney development, point mutations in the gene encoding WTX are the cause of Wilms tumor (WT), an embryonal malignancy of the kidney that affects approximately 1 in 10,000 infants and young children. WTX is implicated in Wnt signaling and defects in the WTX gene leads to abnormalities in Wnt signaling, and in turn causes X-linked sclerosing bone dysplasia and osteopathia striata congenita with cranial sclerosis, which are characterized by increased bone density and craniofacial malformations in females and lethality in males.

REFERENCES

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3. Rivera, M.N., et al. 2007. An X chromosome gene, WTX, is commonly inactivated in Wilms tumor. Science 315: 642-645.
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5. Ruteshouser, E.C., et al. 2008. Wilms tumor genetics: mutations in WT1, WTX, and CTNNB1 account for only about one-third of tumors. Genes Chromosomes Cancer 47: 461-470.
6. Yoo, N.J., et al. 2009. Mutational analysis of WTX gene in Wnt/β-catenin pathway in gastric, colorectal, and hepatocellular carcinomas. Dig. Dis. Sci. 54: 1011-1014.
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8. Perdu, B., et al. 2009. Osteopathia striata with cranial sclerosis due to WTX gene defect. J. Bone Miner. Res. 25: 82-90.
9. Jenkins, Z.A., et al. 2009. Germline mutations in WTX cause a sclerosing skeletal dysplasia but do not predispose to tumorigenesis. Nat. Genet. 41: 95-100.

CHROMOSOMAL LOCATION

Genetic locus: FAM123B (human) mapping to Xq11.2; Fam123b (mouse) mapping to X C3.

SOURCE

WTX (K-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of WTX 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-138079 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

WTX (K-14) is recommended for detection of WTX 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).

WTX (K-14) is also recommended for detection of WTX in additional species, including canine, bovine and porcine.

Suitable for use as control antibody for WTX siRNA (h): sc-91345, WTX siRNA (m): sc-155366, WTX shRNA Plasmid (h): sc-91345-SH, WTX shRNA Plasmid (m): sc-155366-SH, WTX shRNA (h) Lentiviral Particles: sc-91345-V and WTX shRNA (m) Lentiviral Particles: sc-155366-V.

Molecular Weight of WTX: 124 kDa.

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 A Blocking Reagent: sc-2333 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.

STORAGE

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

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.