SANTA CRUZ BIOTECHNOLOGY, INC.

WT1 (F-6): sc-7385

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 at 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 (WT1) binds the DNA sequence GCGGGGGCG, a recognition element common to the early growth response (Egr) family of Zn^{2+} finger transcriptional activators. However, in contrast to Egr transcription factors, WT1 behaves as a transcriptional repressor in transient transfection assays with synthetic promotor constructs.

CHROMOSOMAL LOCATION

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

SOURCE

WT1 (F-6) is a mouse monoclonal antibody epitope corresponding to a domain 180 amino acids in length mapping near the N-terminus of Wilms' tumor (WT1) of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin. Also available as TransCruz reagent for Gel Supershift and ChIP applications, sc-7385 X, 200 µg/0.1 ml.

WT1 (F-6) is available conjugated to agarose (sc-7385 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to either Alexa Fluor® 546 (sc-7385 AF546) or Alexa Fluor® 594 (sc-7385 AF594), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-7385 AF680) or Alexa Fluor® 790 (sc-7385 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

WT1 (F-6) is recommended for detection of WT1 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)] and immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

Suitable for use as control antibody for WT1 siRNA (h): sc-36846, WT1 siRNA (m): sc-36845, WT1 shRNA Plasmid (h): sc-36846-SH, WT1 shRNA Plasmid (m): sc-36845-SH, WT1 shRNA (h) Lentiviral Particles: sc-36846-V and WT1 shRNA (m) Lentiviral Particles: sc-36845-V.

WT1 (F-16) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of WT1: 52 kDa.

Positive Controls: MOLT-4 cell lysate: sc-2233, MCF7 whole cell lysate: sc-2206 or K-562 whole cell lysate: sc-2203.

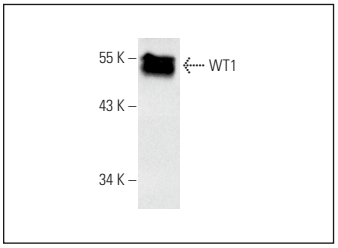
RESEARCH USE

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

STORAGE

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

DATA



WT1 (F-6): sc-7385. Western blot analysis of WT1 expression in K-562 whole cell lysate.

SELECT PRODUCT CITATIONS

1. Oates, J., et al. 2000. HBME-1, MOC-31, WT1 and calretinin: an assessment of recently described markers for mesothelioma and adenocarcinoma. Histopathology 36: 341-347.
2. Murugan, S., et al. 2012. WT1 and Sox11 regulate synergistically the promoter of the Wnt4 gene that encodes a critical signal for nephrogenesis. Exp. Cell Res. 318: 1134-1145.
3. Zhou, Y., et al. 2013. Aristolochic acid causes albuminuria by promoting mitochondrial DNA damage and dysfunction in podocyte. PLoS ONE 8: e83408.
4. Venkatareddy, M., et al. 2014. Estimating podocyte number and density using a single histologic section. J. Am. Soc. Nephrol. 25: 1118-1129.
5. Mallipattu, S.K., et al. 2015. Krüppel-like factor 6 regulates mitochondrial function in the kidney. J. Clin. Invest. 125: 1347-1361.
6. Zhu, J., et al. 2016. Loss of diacylglycerol kinase ε in mice causes endothelial distress and impairs glomerular Cox-2 and PGE2 production. Am. J. Physiol. Renal Physiol. 310: F895-F908.
7. Lovric, S., et al. 2017. Mutations in sphingosine-1-phosphate lyase cause nephrosis with ichthyosis and adrenal insufficiency. J. Clin. Invest. 127: 912-928.
8. Wu, H., et al. 2018. Comparative analysis and refinement of human PSC-derived kidney organoid differentiation with single-cell transcriptomics. Cell Stem Cell 23: 869-881.e8.
9. Lin, C.L., et al. 2019. A KDM6A-KLF10 reinforcing feedback mechanism aggravates diabetic podocyte dysfunction. EMBO Mol. Med. 11: e9828.
10. Hayashi, K., et al. 2020. Association of glomerular DNA damage and DNA methylation with one-year eGFR decline in IgA nephropathy. Sci. Rep. 10: 237.

PROTOCOLS

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