SANTA CRUZ BIOTECHNOLOGY, INC.

Wnt-7a (K-15): sc-26361

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

The Wnt gene family encodes secreted signaling molecules that bind to frizzled receptors and influence oncogenesis and developmental processes, including regulation of cell fate and patterning during embryogenesis. The Wnt family has two functional classes according to their biological activities; Wnts that signal through a Wnt-1/wingless pathway by stabilizing cytoplasmic β-catenin, and Wnts that stimulate intracellular Ca^{2+} release and activate two kinases, CamKII and PKC, in a G protein-dependent manner. Wnt-7a guides the development of the anterior-posterior axis in the female reproductive tract, and influences uterine smooth muscle pattering and maintenance of adult uterine function. The human Wnt-7a gene maps to chromosome 3p25.1. The human Wnt-7b gene maps to chromosome 22q13.31.

CHROMOSOMAL LOCATION

Genetic locus: WNT7A (human) mapping to 3p25.1; Wnt7a (mouse) mapping to 6 D1.

SOURCE

Wnt-7a (K-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of Wnt-7a 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-26361 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Wnt-7a (K-15) is recommended for detection of precursor and mature Wnt-7a 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)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Wnt-7a (K-15) is also recommended for detection of precursor and mature Wnt-7a in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for Wnt-7a siRNA (h): sc-41114, Wnt-7a siRNA (m): sc-41115, Wnt-7a shRNA Plasmid (h): sc-41114-SH, Wnt-7a shRNA Plasmid (m): sc-41115-SH, Wnt-7a shRNA (h) Lentiviral Particles: sc-41114-V and Wnt-7a shRNA (m) Lentiviral Particles: sc-41115-V.

Molecular Weight of Wnt-7a: 39 kDa.

Positive Controls: BT-20 cell lysate: sc-2223 or Wnt-7a (h2): 293T Lysate: sc-176093.

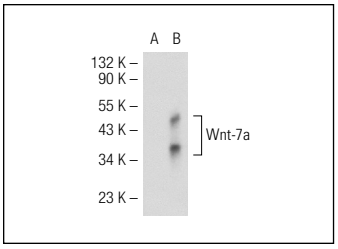
STORAGE

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

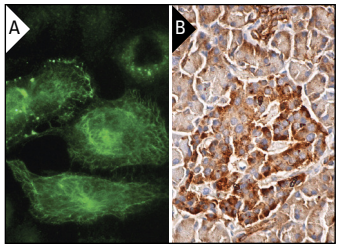
RESEARCH USE

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

DATA



Wnt-7a (K-15): sc-26361. Western blot analysis of Wnt-7a expression in non-transfected: sc-117752 (**A**) and human Wnt-7a transfected: sc-176093 (**B**) 293T whole cell lysates.



Wnt-7a (K-15): sc-26361. Immunofluorescence staining of methanol-fixed HeLa cells showing cell surface localization (**A**). Immunoperoxidase staining of formalin fixed, paraffin-embedded human pancreas tissue showing cytoplasmic staining of Islets of Langerhans and glandular cells (**B**).

SELECT PRODUCT CITATIONS

1. Brynczka, C., et al. 2008. The p53 transcriptional target gene Wnt-7b contributes to NGF-inducible neurite outgrowth in neuronal PC12 cells. Differentiation 76: 795-808.
2. He, W., et al. 2009. Wnt/β-catenin signaling promotes renal interstitial fibrosis. J. Am. Soc. Nephrol. 20: 765-776.
3. Kiewisz, J., et al. 2011. Gene expression of WNTs, β-catenin and E-cadherin during the periimplantation period of pregnancy in pigs-involvement of steroid hormones. Theriogenology 76: 687-699.
4. Ochoa-Hernández, A.B., et al. 2012. Peripheral T-lymphocytes express WNT7A and its restoration in leukemia-derived lymphoblasts inhibits cell proliferation. BMC Cancer 12: 60.
5. Qin, S., et al. 2012. c-Met and NFκB-dependent overexpression of Wnt7a and -7b and Pax2 promotes cystogenesis in polycystic kidney disease. J. Am. Soc. Nephrol. 23: 1309-1318.

PROTOCOLS

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