SANTA CRUZ BIOTECHNOLOGY, INC.

Wnt-10a (A-4): sc-376028

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

The Wnt family of protooncogenes consists of at least 13 known members which encode secreted signaling proteins that are involved in oncogenesis and several other developmental processes, such as regulation of cell fate and embryogenesis. Wnt-10a (wingless-type MMTV integration site family, member 10A) is a 417 amino acid protein that is secreted into the extracellular matrix and belongs to the Wnt family. Strongly expressed in promyelocytic leukemia and Burkitt's lymphoma, Wnt-10a functions as a ligand for frizzled proteins and is thought to be involved in development of the central nervous system, probably acting as a signaling molecule. Overexpression of Wnt-10a is associated with the pathogenesis of various carcinomas, strongly suggesting a role for Wnt-10a in tumor development and metastasis. Defects in the gene encoding Wnt-10a are the cause of odonto-onycho-dermal dysplasia (OODD), a rare autosomal recessive disorder that is characterized by dry hair, onychodysplasia and hyperkeratosis of the skin.

REFERENCE

1. Tanaka, K., et al. 2000. The evolutionarily conserved porcupine gene family is involved in the processing of the Wnt family. Eur. J. Biochem. 267: 4300-4311.
2. Kirikoshi, H., et al. 2001. WNT10A and WNT6, clustered in human chromosome 2q35 region with head-to-tail manner, are strongly coexpressed in SW480 cells. Biochem. Biophys. Res. Commun. 283: 798-805.
3. Katoh, Y. and Katoh, M. 2005. Identification and characterization of rat Wnt6 and Wnt10a genes in silico. Int. J. Mol. Med. 15: 527-531.
4. Adaimy, L., et al. 2007. Mutation in WNT10A is associated with an autosomal recessive ectodermal dysplasia: the odonto-onycho-dermal dysplasia. Am. J. Hum. Genet. 81: 821-828.

CHROMOSOMAL LOCATION

Genetic locus: WNT10A (human) mapping to 2q35; Wnt10a (mouse) mapping to 1 C3.

SOURCE

Wnt-10a (A-4) is a mouse monoclonal antibody raised against amino acids 153-229 mapping within an internal region of Wnt-10a of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Wnt-10a (A-4) is available conjugated to agarose (sc-376028 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-376028 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-376028 PE), fluorescein (sc-376028 FITC), Alexa Fluor® 488 (sc-376028 AF488), Alexa Fluor® 546 (sc-376028 AF546), Alexa Fluor® 594 (sc-376028 AF594) or Alexa Fluor® 647 (sc-376028 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-376028 AF680) or Alexa Fluor® 790 (sc-376028 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

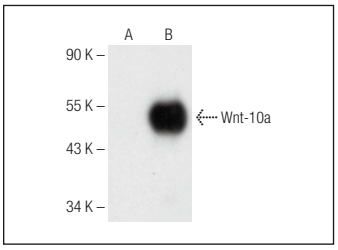
Wnt-10a (A-4) is recommended for detection of Wnt-10a of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 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).

Suitable for use as control antibody for Wnt-10a siRNA (h): sc-76927, Wnt-10a siRNA (m): sc-76928, Wnt-10a shRNA Plasmid (h): sc-76927-SH, Wnt-10a shRNA Plasmid (m): sc-76928-SH, Wnt-10a shRNA (h) Lentiviral Particles: sc-76927-V and Wnt-10a shRNA (m) Lentiviral Particles: sc-76928-V.

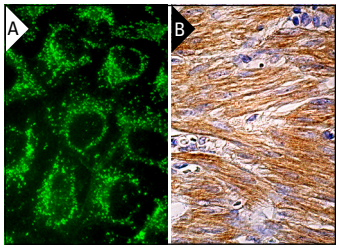
Molecular Weight of Wnt-10a: 46 kDa.

Positive Controls: human Wnt-10a transfected HEK293T whole cell lysate.

DATA



Wnt-10a (A-4): sc-376028. Western blot analysis of Wnt-10a expression in non-transfected (**A**) and human Wnt-10a transfected (**B**) HEK293T whole cell lysates.



Wnt-10a (A-4): sc-376028. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization (**A**). Immunoperoxidase staining of formalin fixed, paraffin-embedded human smooth muscle tissue showing cytoplasmic staining of smooth muscle cells (**B**).

SELECT PRODUCT CITATIONS

1. Long, A., et al. 2015. WNT10A promotes an invasive and self-renewing phenotype in esophageal squamous cell carcinoma. Carcinogenesis 36: 598-606.
2. Ma, E.B., et al. 2019. Irisin exerts inhibitory effect on adipogenesis through regulation of Wnt signaling. Front. Physiol. 10: 1085.
3. Varma, M., et al. 2020. Cell type- and stimulation-dependent transcriptional programs regulated by Atg16L1 and its Crohn's disease risk variant T300A. J. Immunol. 205: 414-424.

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.