SANTA CRUZ BIOTECHNOLOGY, INC.

Dkk-2 (183D2D): sc-517634

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

The Wnt genes are a group of well conserved, cysteine-rich secreted glycoproteins that are required for numerous develop-mental processes including embryogenesis, asymmetric cell division and central nervous system (CNS) patternins. Wnt association with the seven membrane spanning receptor Frizzled, activates Dishevelled, which downregulates glycogen synthase kinase (GSK) through serine phosphorylation, causing the accumulation of β-Catenin and subsequent regulation of developmentally significant Wnt target genes. The Dickkopf family of secreted inhibitors of Wnt signaling ensures proper morphological development by antagonizing different stages of the Wnt cascade. Dkk-2 (Dickkopf-2) is a 259-amino acid secreted protein that is composed of an N-terminal signal peptide and two conserved cysteine-rich domains, which are separated by a 50-55-amino acid linker region.

REFERENCES

1. Krasnow, R.E., et al. 1995. Dishevelled is a component of the frizzled signaling pathway in *Drosophila*. Development 121: 4095-4102.
2. Cadigan, K.M., et al. 1997. Wnt signaling: a common theme in animal development. Genes Dev. 11: 3286-3305.
3. Sakanaka, C., et al. 1998. Bridging of β-catenin and glycogen synthase kinase-3β by axin and inhibition of β-catenin-mediated transcription. Proc. Natl. Acad. Sci. USA 95: 3020-3023.
4. Glinka, A., et al. 1998. Dickkopf-1 is a member of a new family of secreted proteins and functions in head induction. Nature 391: 357-362.
5. Fedi, P., et al. 1999. Isolation and biochemical characterization of the human Dkk-1 homologue, a novel inhibitor of mammalian Wnt signaling. J. Biol. Chem. 274: 19465-19472.
6. Krupnik, V.E., et al. 1999. Functional and structural diversity of the human Dickkopf gene family. Gene 238: 301-133.
7. Online Mendelian Inheritance in Man, OMIM™. 2000. Johns Hopkins University, Baltimore, MD. MIM Number: 605189. World Wide Web URL: http://www.ncbi.nlm.nih. gov/omim/

CHROMOSOMAL LOCATION

Genetic locus: DKK2 (human) mapping to 4q25; Dkk2 (mouse) mapping to 3 G3.

SOURCE

Dkk-2 (183D2D) is a mouse monoclonal antibody raised against recombinant Dkk-2 of human origin.

PRODUCT

Each vial contains 100 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

STORAGE

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

APPLICATIONS

Dkk-2 (183D2D) is recommended for detection of Dkk-2 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000).

Suitable for use as control antibody for Dkk-2 siRNA (h): sc-37084, Dkk-2 siRNA (m): sc-37085, Dkk-2 shRNA Plasmid (h): sc-37084-SH, Dkk-2 shRNA Plasmid (m): sc-37085-SH, Dkk-2 shRNA (h) Lentiviral Particles: sc-37084-V and Dkk-2 shRNA (m) Lentiviral Particles: sc-37085-V.

Molecular Weight of Dkk-2: 28 kDa.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048.

RESEARCH USE

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

PROTOCOLS

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