SANTA CRUZ BIOTECHNOLOGY, INC.

Vangl2 (C-2): sc-515187



BACKGROUND

The Vang family of proteins are integral membrane proteins that are homologs of the *Drosophila* tissue polarity gene strabismus. The gene encoding for Van Gogh-like protein 1 (Vangl1), also designated strabismus 2 (STB2), localizes to chromosome 1p13.1. Van Gogh-like protein 2 (Vangl2), also designated strabismus 1 (STB1), localizes on chromosome 1q23.2. Vangl1 is expressed in testis and ovary, but also in gastric and pancreatic cancer. Vangl proteins play a key developmental role in establishing planar cell polarity (PCP) and in regulating convergent extension (CE) movements during embryogenesis. Vangl1 and Vangl2 are both downregulated in several cancer cell lines and primary tumors.

CHROMOSOMAL LOCATION

Genetic locus: VANGL2 (human) mapping to 1q23.2; Vangl2 (mouse) mapping to 1 H3.

SOURCE

Vangl2 (C-2) is a mouse monoclonal antibody raised against amino acids 268-322 mapping within a cytoplasmic domain of Vangl2 of human origin.

PRODUCT

Each vial contains 200 μg lgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Vangl2 (C-2) is available conjugated to agarose (sc-515187 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-515187 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-515187 PE), fluorescein (sc-515187 FITC), Alexa Fluor[®] 488 (sc-515187 AF488), Alexa Fluor[®] 546 (sc-515187 AF546), Alexa Fluor[®] 594 (sc-515187 AF594) or Alexa Fluor[®] 647 (sc-515187 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-515187 AF680) or Alexa Fluor[®] 790 (sc-515187 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

RESEARCH USE

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

APPLICATIONS

Vangl2 (C-2) is recommended for detection of Vangl2 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)], 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).

Suitable for use as control antibody for Vangl2 siRNA (h): sc-45595, Vangl2 siRNA (m): sc-45596, Vangl2 shRNA Plasmid (h): sc-45595-SH, Vangl2 shRNA Plasmid (m): sc-45596-SH, Vangl2 shRNA (h) Lentiviral Particles: sc-45595-V and Vangl2 shRNA (m) Lentiviral Particles: sc-45596-V.

Molecular Weight of Vangl2: 65 kDa.

Positive Controls: IMR-32 cell lysate: sc-2409, AN3 CA cell lysate: sc-24662 or human brain extract: sc-364375.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG K BP-HRP: sc-516102 or m-IgG K 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. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgG K BP-FITC: sc-516140 or m-IgG K BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA





Vangl2 (C-2): sc-515187. Western blot analysis of Vangl2 expression in IMR-32 whole cell lysate $({\bf A})$ and human brain tissue extract $({\bf B}).$

Vangl2 (C-2) Alexa Fluor[®] 488: sc-515187 AF488. Direct fluorescent western blot analysis of Vangl2 expression in AN3 CA whole cell lysate (**A**) and human brain tissue extract (**B**). Blockad with UltraCruz[®] Blocking Reagent: sc-516214. Cruz Marker[™] Molecular Weight Standards detected with Cruz Marker MW Tag-Alexa Fluor[®] 647: sc-516791.

SELECT PRODUCT CITATIONS

- 1. Gong, Y., et al. 2021. Vangl2 limits chaperone-mediated autophagy to balance osteogenic differentiation in mesenchymal stem cells. Dev. Cell 56: 2103-2120.e9.
- Ban, Y., et al. 2021. Prickle promotes the formation and maintenance of glutamatergic synapses by stabilizing the intercellular planar cell polarity complex. Sci. Adv. 7: eabh2974.
- Sheng, X., et al. 2022. Vangl2 participates in the primary ciliary assembly under low fluid shear stress in hUVECs. Cell Tissue Res. 387: 95-109.
- 4. Hu, Z., et al. 2023. VANGL2 inhibits antiviral IFN-I signaling by targeting TBK1 for autophagic degradation. Sci. Adv. 9: eadg2339.
- Hou, C.C., et al. 2023. Heterozygous FOXJ1 mutations cause incomplete ependymal cell differentiation and communicating hydrocephalus. Cell. Mol. Neurobiol. 43: 4103-4116.

STORAGE

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

PROTOCOLS

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

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