SANTA CRUZ BIOTECHNOLOGY, INC.

Vangl1 (E-3): sc-166844

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

The Vang family of proteins are integral membrane proteins that are homologues of the *Drosophila* tissue polarity gene strabismus. The gene encoding for Van Gogh-like protein 1 (Vangl1), also designated Strabismus 2 (STB2), localizes to human chromosome 1p13.1. Van Gogh-like protein 2 (Vangl2), also designated Strabismus 1 (STB1), localizes to chromosome 1q23.2. Vangl1 is expressed primarily in testis and ovary, but is also expressed 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.

REREFERENCES

1. Torban, E., et al. 2004. Van Gogh-like 2 (Strabismus) and its role in planar cell polarity and convergent extension in vertebrates. Trends Genet. 20: 570-577.
2. Torban, E., et al. 2004. Independent mutations in mouse Vangl2 that cause neural tube defects in looptail mice impair interaction with members of the dishevelled family. J. Biol. Chem. 279: 52703-52713.
3. Lu, X., et al. 2004. PTK7/CCK-4 is a novel regulator of planar cell polarity in vertebrates. Nature 430: 93-98.
4. Jessen, J.R., et al. 2004. Identification and developmental expression pattern of Van Gogh-like 1, a second zebrafish strabismus homologue. Gene Expr. Patterns 4: 339-344.

CHROMOSOMAL LOCATION

Genetic locus: VANGL1 (human) mapping to 1p13.1; Vangl1 (mouse) mapping to 3 F2.2.

SOURCE

Vangl1 (E-3) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 275-305 within a cytoplasmic domain of Vangl1 of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Vangl1 (E-3) is available conjugated to agarose (sc-166844 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-166844 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-166844 PE), fluorescein (sc-166844 FITC), Alexa Fluor® 488 (sc-166844 AF488), Alexa Fluor® 546 (sc-166844 AF546), Alexa Fluor® 594 (sc-166844 AF594) or Alexa Fluor® 647 (sc-166844 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-166844 AF680) or Alexa Fluor® 790 (sc-166844 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-166844 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

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APPLICATIONS

Vangl1 (E-3) is recommended for detection of Vangl1 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

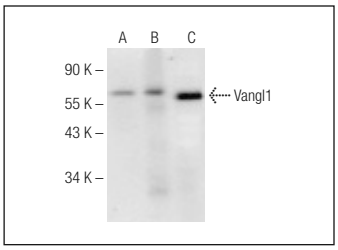
Vangl1 (E-3) is also recommended for detection of Vangl1 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for Vangl1 siRNA (h): sc-45789, Vangl1 siRNA (m): sc-45790, Vangl1 shRNA Plasmid (h): sc-45789-SH, Vangl1 shRNA Plasmid (m): sc-45790-SH, Vangl1 shRNA (h) Lentiviral Particles: sc-45789-V and Vangl1 shRNA (m) Lentiviral Particles: sc-45790-V.

Molecular Weight of Vangl1: 66 kDa.

Positive Controls: SW-13 cell lysate: sc-24778, CHO-K1 cell lysate: sc-3809 or Vangl1 (h2): 293T Lysate: sc-117119.

DATA



Vangl1 (E-3): sc-166844. Western blot analysis of Vangl1 expression in non-transfected 293T: sc-117752 (**A**), human Vangl1 transfected 293T: sc-117119 (**B**) and SW-14 (**C**) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Zhang, H., et al. 2015. The homologous genes Vangl1 and Vangl2 are required for embryo implantation in the uterus of mice during early pregnancy. Gene 555: 140-149.
2. Mentink, R.A., et al. 2018. The planar cell polarity protein VANG-1/Vangl negatively regulates Wnt/β-catenin signaling through a Dvl dependent mechanism. PLoS Genet. 14: e1007840.
3. Tao, H., et al. 2022. MicroRNA-27a-3p targeting Vangl1 and Vangl2 inhibits cell proliferation in mouse granulosa cells. Biochim. Biophys. Acta Gene Regul. Mech. E-published.

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.