

#14783 Store at -20C

VANGL1 (D1J7X) Rabbit mAb**Cell Signaling**
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Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
WB	H M R Hm Mk	Endogenous	60	Rabbit IgG	#Q8TAA9	81839

Product Usage Information**Application**

Western Blotting

Dilution

1:1000

Storage

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at -20°C. Do not aliquot the antibody.

Specificity / Sensitivity

VANGL1 (D1J7X) Rabbit mAb recognizes endogenous levels of total VANGL1 protein. This antibody does not cross-react with VANGL2 protein.

Species predicted to react based on 100% sequence homology:

Chicken, Bovine, Pig, Horse

Source / Purification

Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Leu309 of human VANGL1 protein.

Background

Van Gogh-like proteins (VANGL1, VANGL2) are human orthologs of *Drosophila* Van Gogh (Vang/Stbm), a multi-pass transmembrane protein that is required to establish cell polarity in embryonic eyes, legs, and bristles (1,2). As in *Drosophila*, mammalian VANGL proteins are core components of the planar cell polarity (PCP) pathway that promotes asymmetric orientation of cells across a planar surface, and drives convergence-extension movements that are critical for tissue morphogenesis (3). Mutations in the human *VANGL1* gene have been identified in patients diagnosed with neural tube defects (e.g., spina bifida), providing evidence that VANGL1 plays a role in human embryonic morphogenesis (4,5). These findings are supported by genetic studies in mice, where mutations in both *Vangl1* and *Vangl2* result in neural tube defects (6,7). A possible role for VANGL in tumor progression is suggested by an increased expression of *VANGL1* mRNA in breast cancer patients with an elevated risk of relapse (8).

Background References

- Wolff, T. and Rubin, G.M. (1998) *Development* 125, 1149-59.
- Bastock, R. et al. (2003) *Development* 130, 3007-14.
- Katoh, M. (2005) *Oncol Rep* 14, 1583-8.
- Kibar, Z. et al. (2007) *N Engl J Med* 356, 1432-7.
- Merello, E. et al. (2015) *Birth Defects Res A Clin Mol Teratol* 103, 51-61.
- Iliescu, A. et al. (2011) *Biochemistry* 50, 795-804.
- Chen, B. et al. (2013) *Genet Mol Res* 12, 3157-65.
- Anastas, J.N. et al. (2012) *Oncogene* 31, 3696-708.

Species Reactivity

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

Western Blot Buffer

IMPORTANT: For western blots, incubate membrane with diluted primary antibody in 5% w/v BSA, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.

Applications Key**WB:** Western Blotting**Cross-Reactivity Key**

H: human **M:** mouse **R:** rat **Hm:** hamster **Mk:** monkey **Vir:** virus **Mi:** mink **C:** chicken **Dm:** D. melanogaster
X: Xenopus **Z:** zebrafish **B:** bovine **Dg:** dog **Pg:** pig **Sc:** S. cerevisiae **Ce:** C. elegans **Hr:** horse
GP: Guinea Pig **Rab:** rabbit **All:** all species expected

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