

## Product Information

### Anti-DVL3 (N-terminal)

produced in rabbit, affinity isolated antibody

Product Number **SAB4200008**

Synonyms: Anti-Dishevelled-3, Anti-Dsh Homolog 3

### Product Description

Anti-DVL3 (N-terminal) is produced in rabbit using as the immunogen a synthetic peptide corresponding to a sequence at the N-terminal of human DVL3 (GenelD: 1857), conjugated to KLH. The corresponding sequence is highly conserved (single amino acid substitution) in mouse and rat DVL3. The antibody is affinity-purified using the immunizing peptide immobilized on agarose.

Anti-DVL3 (N-terminal) specifically recognizes human DVL3. The antibody may be used in various immunochemical techniques including immunoblotting (~95 kDa) and immunoprecipitation. Detection of the DVL3 band by immunoblotting is specifically inhibited by the DVL3 immunizing peptide.

Wnt signaling pathways play an essential role in the regulation of cellular proliferation, differentiation, motility, and morphogenesis, and have been linked to some forms of cancer.<sup>1,2</sup> Dishevelled (Dsh, DVL) proteins are part of a multigene family that mediate wnt signaling pathways. In the canonical wnt pathway, DVLs operate by upregulating  $\beta$ -catenin levels and stimulating TCF/LEF-1-dependent transcription. In mammals, three genes encoding isoforms of Dishevelled are present, DVL1, DVL2, and DVL3, which differentially mediate the wnt canonical signaling pathway.<sup>3-5</sup> The three DVL isoforms display high sequence homology and have conserved DIX, PDZ, and DEP domains required for GSK3 $\beta$  inactivation.

DVL3 is a phosphoprotein, widely expressed in fetal tissues and specifically expressed in various adult tissues.<sup>6</sup> DVL3, like other members of the DVL family, functions upstream of GSK3 $\beta$  to modulate the canonical wnt pathway. Knockdown of DVL3 has been shown to attenuate the activation of the wnt signaling pathway by Wnt3A.<sup>4</sup> DVL3 functions in redundant pathways with DVL1 and DVL2, and is necessary in normal cardiac, cochlea, and neural tube development in mice.<sup>7</sup>

### Reagent

Supplied as a solution in 0.01 M phosphate buffered saline, pH 7.4, containing 15 mM sodium azide.

Antibody concentration: ~1.5 mg/mL

### Precautions and Disclaimer

For R&D use only. Not for drug, household, or other uses. Please consult the Safety Data Sheet for information regarding hazards and safe handling practices.

### Storage/Stability

Store at  $-20^{\circ}\text{C}$ . For continuous use, the product may be stored at  $2-8^{\circ}\text{C}$  for up to one month. For extended storage, freeze in working aliquots at  $-20^{\circ}\text{C}$ . Repeated freezing and thawing, or storage in "frost-free" freezers, is not recommended. If slight turbidity occurs upon prolonged storage, clarify the solution by centrifugation before use. Working dilutions should be discarded if not used within 12 hours.

### Product Profile

**Immunoblotting:** a working antibody concentration of 0.25-0.5  $\mu\text{g}/\text{mL}$  is recommended using a HEK-293T cell lysates overexpressing human DVL3.

**Immunoprecipitation:** a working antibody amount of 2.5-5  $\mu\text{g}$  is recommended using a HEK-293T cell lysate overexpressing human DVL3.

**Note:** In order to obtain best results in various techniques and preparations, it is recommended to determine optimal working dilutions by titration.

## References

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3. Semenov, M., and Snyder, M., *Genomics*, **42**, 302-310 (1997).
4. Lee, Y. et al., *Cell Signal.*, **20**, 443-452 (2008).
5. Li, L. et al., *J. Biol. Chem.*, **274**, 129-134 (1996).
6. Pizzuti, A., et al., *Human Mol. Genet.*, **5**, 953-958 (1996).
7. Etheridge, S.L., et al., *PloS Genetics*, **4**, e1000259. doi10.1371 (2008).

VS,ER,TD,KAA,PHC,MAM 06/19-1