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Product Information

Anti-DVL1 (C-terminal)
produced in rabbit, affinity isolated antibody

Product Number **D3320**

Product Description

Anti-DVL1 (C-terminal) is produced in rabbit using as the immunogen a synthetic peptide corresponding a sequence at the C-terminal of human DVL1 (GeneID: 1855), conjugated to KLH. The corresponding sequence is conserved (83% identity) in rat and mouse DVL1. The antibody is affinity-purified using the immunizing peptide immobilized on agarose.

Anti-DVL1 (C-terminal) specifically recognizes human DVL1. The antibody may be used in various immunochemical techniques including immunoblotting (~85 kDa). Detection of the DVL1 band by immunoblotting is specifically inhibited by the DVL1 immunizing peptide.

The Wnt signaling pathways play an essential role in the regulation of cellular proliferation, differentiation, motility, and morphogenesis, and has been linked to some forms of cancer.[1,2] Dishevelled (Dsh, DVL) proteins are part of a multigene family that mediate wnt signaling pathways. In the canonical wnt pathway, DVL operates by up-regulating β-catenin levels and stimulating TCF/LEF-1-dependent transcription. In mammals, three genes encoding isoforms of dishevelled are present, DVL1, DVL2, and DVL3, that differentially mediate the wnt canonical signaling pathway.[3-5] The three DVL isoforms display high sequence homology and have conserved DIX, PDZ, and DEP domains required for GSK3β inactivation. DVL1 (dishevelled-1, dsh homolog 1) regulates the activity of JNK and GSK3β in the wnt signaling pathway.[5] Activation of the wnt signaling pathway is thought to cause DVL1 to inactivate GSK3β through complex formation with APC, β-catenin and axin proteins, releasing β-catenin from degradation. In contrast, DVL1 activates JNK by a different signaling mechanism.[5,6] DVL1 is highly expressed in adult and fetal tissues such as skeletal muscle and pancreas but is also found in the brain and neural tube. In neurons, DVL1 has been reported to be localized to axonal microtubules and to stabilize microtubules by inhibiting the GSK3β mediated phosphorylation of MAP-1B.[7]

Reagent

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

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

For continuous use, store at 2–8 °C for up to one month. For extended storage, freeze in working aliquots. 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 concentration of 2.0-4.0 μg/mL is recommended using a HEK-293T cell lysate expressing human DVL1.

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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5. Li, L. et al, *J. Biol. Chem.,* **274**, 129-134 (1999).
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VS,ER,TD,KAA,PHC,MAM 04/19-1