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ProductInformation

Anti-δ-Catenin/NPRAP (KE-20)
Developed in Rabbit
IgG Fraction of Antiserum

Product Number **C 4864**

Product Description

Anti-δ-Catenin/NPRAP (KE-20) is developed in rabbit using as immunogen a synthetic peptide corresponding to a region near the N-terminal of mouse δ-catenin/NPRAP (amino acids 27-46), conjugated to KLH. This δ-catenin/NPRAP sequence is highly conserved (single amino acid substitution) in human δ-catenin/NPRAP. Whole antiserum is fractionated and then further purified by ion-exchange chromatography to provide the IgG fraction of antiserum that is essentially free of other rabbit serum proteins.

Anti-δ-Catenin/NPRAP (KE-20) recognizes δ-catenin/NPRAP (150 kDa) by immunoblotting. Staining of δ-catenin/NPRAP band in immunoblotting is specifically inhibited with the δ-catenin/NPRAP immunizing peptide (mouse, amino acids 27-46).

δ-Catenin, also termed neural plakophilin-related armadillo-repeat protein (NPRAP) and neurojungin (150 kDa), is a member of the p120 catenin ($p120^{ctn}$) subfamily that includes B6P/plakophilin 1, plakophilin 2, armadillo-repeat gene deleted in velo-cardiofacial syndrome, ARVCF, and p0071.[1] Members of this subfamily are defined as proteins containing 10 armadillo (Arm) repeats, typically 42 to 45 amino acid imperfect repeat units, in characteristic spacing and often with diverse N- and C-terminal sequences that flank the repeats.[2] δ-Catenin/NPRAP was identified as an α protein homologous to plakophilin 1 and as a protein interacting to the loop region of presenilin 1 (PS1), the gene most commonly mutated in Alzheimer's disease.[3, 4]

δ-Catenin/NPRAP is almost exclusively expressed in the central nervous system mainly during early brain development. δ-Catenin/NPRAP co-localizes and interact with N-cadherin in mouse brain and undergoes dynamic relocalization during brain development.[5]

In transfected MDCK cells and in mouse brain, α-catenin colocalizes and interacts with adhesive junction proteins, including E-cadherin, $p120^{ctn}$ and β-catenin.[6] In addition, the ectopic expression of δ-catenin/NPRAP in MDCK cells, δ-catenin/NPRAP alters their morphology, induces the elaboration of lamellipodia, interferes with monolayer formation, and increases scattering in response to hepatocyte growth factor. δ-Catenin/NPRAP has been reported to bind to the Psd-95/Dlg-A/ZO-1 (PDZ) domains of synaptic scaffolding molecule S-SCAM, PAPIN, and densin-180.[7-9] These observations suggest that δ-Catenin/NPRAP may play an important role in the organization of synaptic cell-cell adhesion and in neuronal migration during brain development. Hemizygosity of the δ-catenin gene *CTNND2* is strongly associated with severe mental retardation in Cri-du-Chat syndrome.

Reagent

Anti-δ-Catenin/NPRAP (KE-20) is supplied as a solution in 0.01 M phosphate buffered saline, pH 7.4, containing 15 mM sodium azide.

Precautions and Disclaimer

Due to the sodium azide content, a material safety data sheet (MSDS) for this product has been sent to the attention of the safety officer of your institution. Consult the MSDS for information regarding hazards and safe handling practices.

Storage/Stability
For continuous use, store at 2-8 °C for up to one month. For prolonged storage, freeze in working aliquots at –20 °C. Repeated freezing and thawing is not recommended. Storage in frost-free freezers is also 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
For immunoblotting, a minimum working antibody dilution of 1:1,000 is recommended using a cytosolic fraction S1 of rat brain.

Note: In order to obtain the best results using various techniques and preparations, we recommend determining the optimal working dilution by titration.

References

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