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ProductInformation

ANTI-PAN CADHERIN
Developed in Rabbit
Delipidized, whole Antiserum

Product Number **C 3678**

Product Description

Anti-Pan Cadherin is developed in rabbit using a synthetic peptide corresponding to the C-terminal amino acids of chicken N-Cadherin with an extra N-terminal lysine residue (24 amino acids) coupled with glutaraldehyde to keyhole limpet hemocyanin (KLH) as the immunogen.[1] The antiserum has been treated to remove lipoproteins.

Rabbit Anti-Pan Cadherin shows specific reactivity with a distinct 135 kDa band on chicken or rabbit heart extract blots using indirect immunoblotting

Cadherins are members of a multigene family of single chain glycoprotein receptors mediating Ca^{++}-dependent cell-cell adhesion.[1,2,3] The N-terminal part of these molecules is exposed on the external cell surface and contains the putative homophilic binding sites. This is followed by a typical single transmembrane sequence and usually, a cytoplasmic C-terminal tail[4] which mediates interaction with the microfilament system through molecules such as catenins, plakoglobin, vinculin, and α-actinin. Cadherins which are primarily located in areas of cell-cell contacts, are involved in selective cell sorting and in the mechanical cytoplasmic response. They are implicated in morphogenetic processes, intercellular signalling and tumor invasiveness and metastasis. Multiple cadherins were characterized from diverse species and tissues including E-Cadherin, N-Cadherin (A-CAM), P-Cadherin, V-Cadherin, R-Cadherin and T-Cadherin. Specific antibodies against a highly conserved sequence from the cytoplasmic C-terminal of N-Cadherin have been prepared.[5,6] These broad spectrum pan-cadherin antibodies, reactive with the C-terminal of N-Cadherin, detect multiple cadherins in human, bovine, canine, avian, amphibian and teleost cultured and tissue cells. This pan-cadherin antibody is applicable in a variety of techniques including immunoblotting, immunofluorescence, immuno-peroxidase and immunoelectron-microscopy. It reacts with tissue cultured cells, acetone fixed frozen sections and formalin-fixed paraffin-embedded tissues.

Reagents

Rabbit Anti-Pan Cadherin is supplied as a liquid containing 15 mM sodium azide as preservative.

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 extended storage, the solution may be frozen in working aliquots. Repeated freezing and thawing is not recommended. Storage in "frost-free" freezers is not recommended. If slight turbidity occurs upon prolonged storage, clarify the solution by centrifugation before use.

Product Profile

Working Dilution

1. A minimum working dilution of 1:100 was determined by indirect immunofluorescent labeling of cultured MDBK cells.
2. A minimum working dilution of 1:1,000 was determined by indirect immunohistochemical labeling of protease-digested, formalin-fixed, paraffin-embedded animal heart sections.

In order to obtain best results, it is recommended that each individual user determine their opitmum working dilution by titration assay.

Rabbit Anti-Pan Cadherin may be used for:

1. Immunochemical and immunocytochemical detection of members of the Cadherin family in normal and neoplastic cells and tissues.
2. Identification of genetically engineered proteins containing the C-terminal cadherin tail.
3. Screening of cDNA expression libraries for identification of novel members of the cadherin family.
4. Demonstration of adherens-type cell-cell junctions irrespective of their cadherin subtype.

References

1. Takeichi, M., Development, **102**, 639 (1988).
2. Takeichi, M., Annu. Rev. Biochem., **59**, 237 (1990).
3. Takeichi, M., Science, **251**, 1451 (1991).
4. Geiger, B., and Ginsberg, D., Cell Mot. Cyto., **20**, 1 (1991).
5. Geiger, B., et al., J. Cell Science, **97**, 607 (1990).
6. Kartenbeck, K., et al, J. Cell. Biol., **113**, 881 (1991).

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