SANTA CRUZ BIOTECHNOLOGY, INC.

pan-cadherin (CH-19): sc-59876

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Cadherins comprise a family of Ca^{2+}-dependent adhesion molecules that function to mediate cell-cell binding critical to the maintenance of tissue structure and morphogenesis. The classical cadherins, E-, N- and P-cadherin, consist of large extracellular domains characterized by a series of five homologous NH_2 terminal repeats. The most distal of these cadherins is thought to be responsible for binding specificity, transmembrane domains and carboxy-terminal intracellular domains. The relatively short intracellular domains interact with a variety of cytoplasmic proteins, such as β-catenin, to regulate cadherin function. Members of this family of adhesion proteins include rat cadherin K (and its human homolog, cadherin-6), R-cadherin, B-cadherin, E/P cadherin and cadherin-5. pan-cadherin includes members of the cadherin family or genetically engineered proteins containing the C-terminal cadherin tail, and adherens type cell-cell junctions regardless of their cadherin type.

REFERENCES

1. Takeichi, M. 1988. The cadherins: cell-cell adhesion molecules controlling animal morphogenesis. Development 102: 639-655.
2. Hatta, M., et al. 1991. Genomic organization and chromosomal mapping of the mouse P-cadherin gene. Nucleic Acids Res. 19: 4437-4441.
3. Koch, P.J., et al. 1994. Desmosomal cadherins: another growing multigene family of adhesion molecules. Curr. Opin. Cell Biol. 6: 682-687.
4. Hinck, L., et al. 1994. Dynamics of cadherin/catenin complex formation: novel protein interactions and pathways of complex assembly. J. Cell Biol. 125: 1327-1340.

SOURCE

pan-cadherin (CH-19) is a mouse monoclonal antibody raised against amino acids 889-912 of cadherin of chicken origin.

PRODUCT

Each vial contains 250 µl ascites containing IgG_1 with PBS and < 0.1% sodium azide.

APPLICATIONS

pan-cadherin (CH-19) is recommended for detection of all cadherins of mouse, rat, human, avian and *Xenopus laevis* origin by Western Blotting (starting dilution to be determined by researcher, dilution range 1:10-1:200), immunoprecipitation [10-20 µl per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution to be determined by researcher, dilution range 1:10-1:200), immunohistochemistry (including paraffin-embedded sections) (starting dilution to be determined by researcher, dilution range 1:10-1:200) and flow cytometry (1-2 µl per 1 x 10^6 cells).

pan-cadherin (CH-19) is also recommended for detection of all cadherins in additional species, including bovine, porcine, feline and canine.

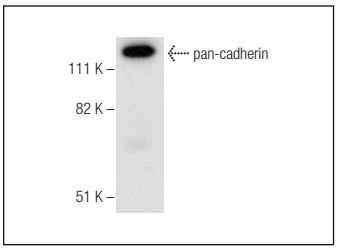
Molecular Weight of pan-cadherin: 120 kDa.

Positive Controls: human colon extract: sc-363757, mouse brain extract: sc-2253 or LNCaP cell lysate: sc-2231.

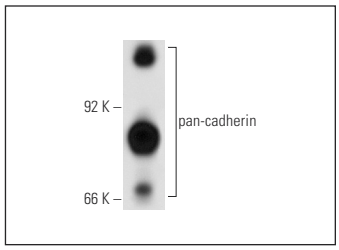
STORAGE

For immediate and continuous use, store at 4° C for up to one month. For sporadic use, freeze in working aliquots in order to avoid repeated freeze/thaw cycles. If turbidity is evident upon prolonged storage, clarify solution by centrifugation.

DATA



pan-cadherin (CH-19): sc-59876. Western blot analysis of pan-cadherin expression in human colon tissue extract.



pan-cadherin (CH-19): sc-59876. Western blot analysis of pan-cadherin expression in 293T whole cell lysate.

SELECT PRODUCT CITATIONS

1. Zhao, Y., et al. 2013. Expression of a phosphorylated substrate domain of $p130^{Cas}$ promotes PyMT-induced c-Src-dependent murine breast cancer progression. Carcinogenesis 34: 2880-2890.
2. Lee, Y.S., et al. 2014. Mechanism and treatment for learning and memory deficits in mouse models of Noonan syndrome. Nat. Neurosci. 17: 1736-1743.
3. Sim, S.E., et al. 2016. The brain-enriched microRNA miR-9-3p regulates synaptic plasticity and memory. J. Neurosci. 36: 8641-8652.
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5. Holmila, R.J., et al. 2018. Mitochondria-targeted probes for imaging protein sulfenylation. Sci. Rep. 8: 6635.
6. Suttitheptumrong, A., et al. 2018. Plectin is required for *trans*-endothelial permeability: a model of plectin dysfunction in human endothelial cells after TNF-α treatment and dengue virus infection. Proteomics 18: e1800215.
7. Zhao, L., et al. 2018. FLCN is a novel Rab11A-interacting protein that is involved in the Rab11A-mediated recycling transport. J. Cell Sci. 131: jcs218792.
8. McNair, K., et al. 2019. Serine protease modulation of dependence receptors and EMT protein expression. Cancer Biol. Ther. 20: 349-367.
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RESEARCH USE

For research use only, not for use in diagnostic procedures.