SANTA CRUZ BIOTECHNOLOGY, INC.

C/EP/B-Cadherin (xN-17): sc-25937

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Cadherin transmembrane proteins mediate adhesion between cells, and their regulated expression during development plays a crucial role in the morphogenesis and patterning of tissues and organs. The cadherin protein superfamily, which is divided into several subgroups, including classical (type I), type II, and desmosomal cadherins, share a common domain organization of five tandem extracellular cadherin domains, a single transmembrane domain, and a highly conserved cytoplasmic domain. In *Xenopus laevis*, C-cadherin participates in the regulation of cell-upon-cell movements during gastrulation, which determines the organization of the body plan. The maternally expressed cadherins, EP- and XB-cadherin, reside in oocytes and mature eggs in *Xenopus*. They play a pivotal role in interblastomere adhesion in the early embryo. EP-cadherin (125 kDa) also shows expression in epidermal cells in association with E-cadherin.

REFERENCES

1. Takeichi, M. 1990. Cadherins: a molecular family important in selective cell-cell adhesion. Annu. Rev. Biochem. 59: 237-252.
2. Ginsberg, D., DeSimone, D. and Geiger, B. 1991. Expression of a novel cadherin (EP-cadherin) in unfertilized eggs and early *Xenopus* embryos. Development 111: 315-325.
3. Levi, G., Ginsberg, D., Girault, J.M., Sabanay, I., Thiery, J.P. and Geiger, B. 1991. EP-cadherin in muscles and epithelia of *Xenopus laevis* embryos. Development 113: 1335-1344.
4. Muller, H.A., Kuhl, M., Finnemann, S., Schneider, S., van der Poel, S.Z., Hausen, P. and Wedlich, D. 1994. *Xenopus* cadherins: the maternal pool comprises distinguishable members of the family. Mech. Dev. 47: 213-223.
5. Gumbiner, B.M. 2000. Regulation of cadherin adhesive activity. J. Cell Biol. 148: 399-404.
6. Jarrett, O., Stow, J.L., Yap, A.S. and Key, B. 2002. Dynamin-dependent endocytosis is necessary for convergent-extension movements in *Xenopus* animal cap explants. Int. J. Dev. Biol. 46: 467-473.
7. Boggon, T.J., Murray, J., Chappuis-Flament, S., Wong, E., Gumbiner, B.M. and Shapiro, L. 2002. C-cadherin ectodomain structure and implications for cell adhesion mechanisms. Science 296: 1308-1313.

SOURCE

C/EP/B-Cadherin (xN-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of C/EP/B-Cadherin of *Xenopus laevis* origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-25937 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

RESEARCH USE

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

APPLICATIONS

C/EP/B-Cadherin (xN-17) is recommended for detection of C/EP/B-Cadherin of *Xenopus laevis* origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

SELECT PRODUCT CITATIONS

1. Horejší, B., et al. 2011. Nuclear γ-tubulin associates with nucleoli and interacts with tumor suppressor protein C53. J. Cell. Physiol. 227: 367-382.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.