

EY-cadherin (YB.2): sc-81791

BACKGROUND

The cadherins are a family of Ca^{2+} -dependent adhesion molecules that function to mediate cell-cell binding events that are critical to the maintenance of cell structure and morphogenesis. EY-cadherin, also known as CDH18 (cadherin 18), CDH14 (cadherin 14), CDH24 or CDH14L, is a 790 amino acid single-pass type I membrane protein that contains five cadherin domains. One of several members of the cadherin superfamily, EY-cadherin functions as a type II classical cadherin that is expressed specifically in the central nervous system (CNS), where it plays a role in cell-cell binding events. Specifically, EY-cadherin is thought to be involved in axon guidance and outgrowth, as well as synaptic adhesion within the CNS. EY-cadherin contains a highly conserved C-terminal domain characteristic of all cadherins, but lacks the HAV cell adhesion sequence that is specific to type I cadherins. The gene encoding EY-cadherin is located within a region on chromosome five that is commonly deleted in carcinomas, implicating EY-cadherin as a potential tumor suppressor.

REFERENCES

1. Shibata, T., et al. 1997. Identification of human cadherin-14, a novel neurally specific type II cadherin, by protein interaction cloning. *J. Biol. Chem.* 272: 5236-5240.
2. Kools, P., et al. 1999. The human cadherin-10 gene: complete coding sequence, predominant expression in the brain, and mapping on chromosome 5p13-14. *FEBS Lett.* 452: 328-334.
3. Chalmers, I.J., et al. 1999. Mapping of a cadherin gene cluster to a region of chromosome 5 subject to frequent allelic loss in carcinoma. *Genomics* 57: 160-163.
4. Shimoyama, Y., et al. 1999. Biochemical characterization and functional analysis of two type II classic cadherins, cadherin-6 and -14, and comparison with E-cadherin. *J. Biol. Chem.* 274: 11987-11994.
5. Shimoyama, Y., et al. 2000. Identification of three human type-II classic cadherins and frequent heterophilic interactions between different subclasses of type-II classic cadherins. *Biochem. J.* 349: 159-167.

CHROMOSOMAL LOCATION

Genetic locus: CDH18 (human) mapping to 5p14.3.

SOURCE

EY-cadherin (YB.2) is a mouse monoclonal antibody raised against recombinant EY-cadherin of human origin.

PRODUCT

Each vial contains 100 μg IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

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.

APPLICATIONS

EY-cadherin (YB.2) is recommended for detection of EY-cadherin of human origin by Western Blotting (starting dilution to be determined by researcher, dilution range 1:100-1:5000), immunoprecipitation [1-2 μl per 100-500 μg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution to be determined by researcher, dilution range 1:100-1:5000), immunohistochemistry (including paraffin-embedded sections) (starting dilution to be determined by researcher, dilution range 1:50-1:2500) and solid phase ELISA (starting dilution to be determined by researcher, dilution range 1:100-1:5000).

Suitable for use as control antibody for EY-cadherin siRNA (h): sc-91694, EY-cadherin shRNA Plasmid (h): sc-91694-SH and EY-cadherin shRNA (h) Lentiviral Particles: sc-91694-V.

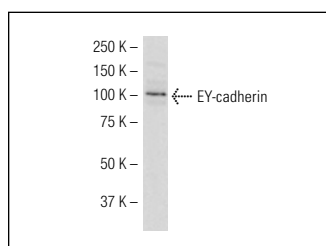
Molecular Weight of EY-cadherin: 88 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200.

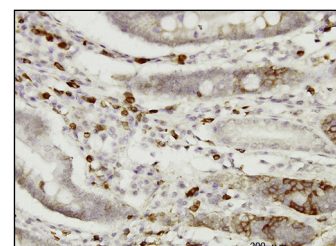
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgG κ BP-FITC: sc-516140 or m-IgG κ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



EY-cadherin (YB.2): sc-81791. Western blot analysis of EY-cadherin expression in HeLa whole cell lysate.



EY-cadherin (YB.2): sc-81791. Immunoperoxidase staining of formalin-fixed, paraffin-embedded human small intestine tissue showing membrane localization.

RESEARCH USE

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

PROTOCOLS

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