

α E-catenin (G-11): sc-9988

BACKGROUND

α E-catenin (also designated α -catenin; cadherin-associated protein, α 1, 102 kDa; and CAP102) plays a role in E-cadherin mediated cell-cell adhesion by linking E-cadherin to the cytoskeleton via β - or γ -catenin and Actin. α E-catenin connects cell-density-dependent adherens junctions with the developmental hedgehog pathway and may provide a negative feedback loop controlling the size of developing cerebral cortex. It is abundant in neuroepithelial precursor cells in the developing cortical ventricular zone of the brain, with reduced expression in the cortical plate. α E-catenin-vinculin interactions play a role in the assembly of the apical junction complex in epithelia. Catenins generally are thought to work as connectors that anchor E-cadherin to the cytoskeletal Actin bundle through the cadherin cytoplasmic domain. Dysfunction of this adhesion complex causes dissociation of cancer cells from primary tumor nodules, thus possibly contributing to cancer invasion and metastasis.

CHROMOSOMAL LOCATION

Genetic locus: CTNNA1 (human) mapping to 5q31.2; Ctnna1 (mouse) mapping to 18 B1.

SOURCE

α E-catenin (G-11) is a mouse monoclonal antibody raised against amino acids 610-906 mapping at the C-terminus of α E-catenin of human origin.

PRODUCT

Each vial contains 200 μ g IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

α E-catenin (G-11) is available conjugated to agarose (sc-9988 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-9988 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-9988 PE), fluorescein (sc-9988 FITC), Alexa Fluor[®] 488 (sc-9988 AF488), Alexa Fluor[®] 546 (sc-9988 AF546), Alexa Fluor[®] 594 (sc-9988 AF594) or Alexa Fluor[®] 647 (sc-9988 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-9988 AF680) or Alexa Fluor[®] 790 (sc-9988 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

α E-catenin (G-11) is recommended for detection of α E-catenin of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500). α E-catenin (G-11) is also recommended for detection of α E-catenin in additional species, including equine, canine and bovine.

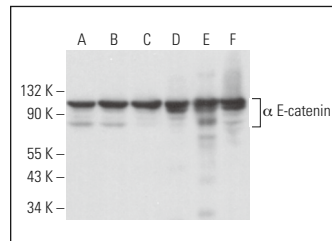
Suitable for use as control antibody for α E-catenin siRNA (h): sc-29190, α E-catenin siRNA (m): sc-29612, α E-catenin shRNA Plasmid (h): sc-29190-SH, α E-catenin shRNA Plasmid (m): sc-29612-SH, α E-catenin shRNA (h) Lentiviral Particles: sc-29190-V and α E-catenin shRNA (m) Lentiviral Particles: sc-29612-V.

Molecular Weight of α E-catenin: 102 kDa.

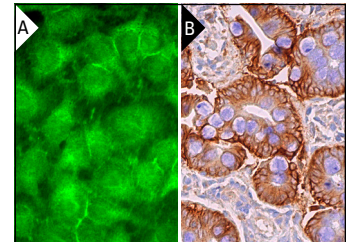
STORAGE

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

DATA



α E-catenin (G-11): sc-9988. Western blot analysis of α E-catenin expression in MCF7 (A), MDA-MB-231 (B), MDA-MB-435S (C) and C6 (D) whole cell lysates and mouse brain (E) and rat breast (F) tissue extracts.



α E-catenin (G-11): sc-9988. Immunofluorescence staining of formalin-fixed HeLa cells showing membrane and cytoplasmic localization (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human colon tissue showing membrane and cytoplasmic staining of glandular cells (B).

SELECT PRODUCT CITATIONS

- Marthiens, V., et al. 2005. A novel function for cadherin-11 in the regulation of motor axon elongation and fasciculation. *Mol. Cell. Neurosci.* 28: 715-726.
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- Ji, H., et al. 2009. EGF-induced ERK activation promotes CK2-mediated disassociation of α -catenin from β -catenin and transactivation of β -catenin. *Mol. Cell* 36: 547-559.
- Li, D., et al. 2011. Dishevelled-associated activator of morphogenesis 1 (Daam1) is required for heart morphogenesis. *Development* 138: 303-315.
- Calaf, G.M., et al. 2013. Differential expression of cell adhesion molecules in an ionizing radiation-induced breast cancer model system. *Oncol. Rep.* 30: 285-291.
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- Chattopadhyay, R., et al. 2017. Resolvin D1 via prevention of ROS-mediated SHP2 inactivation protects endothelial adherens junction integrity and barrier function. *Redox Biol.* 12: 438-455.
- Bai, S., et al. 2018. A germline-specific role for the mTORC2 component rictor in maintaining spermatogonial differentiation and intercellular adhesion in mouse testis. *Mol. Hum. Reprod.* 24: 244-259.
- Shen, M., et al. 2018. Cell-specific functions of ADAM17 regulate the progression of thoracic aortic aneurysm. *Circ. Res.* 123: 372-388.

RESEARCH USE

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

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