SANTA CRUZ BIOTECHNOLOGY, INC.

p120 siRNA (m): sc-36140

BACKGROUND

The catenins, α, β and γ, are proteins which bind to the highly conserved, intra-cellular cytoplasmic tail of E-cadherin. Together, the catenin/cadherin complexes play an important role mediating cellular adhesion. α-catenin was initially described as an E-cadherin-associated protein and has been shown to associate with other members of the cadherin family, N-cadherin and P-cadherin. B-catenin associates with the cytoplasmic portion of E-cadherin which is necessary for the function of E-cadherin as an adhesion molecule. β-catenin has also been found in complexes with the tumor suppressor protein APC. γ-catenin, also known as plakoglobin, is a protein that binds with α-catenin and N-cadherin. A related protein, p120, exhibits sequence homology with the catenins at four discreet domains. p120 not only serves as a substrate for Src, but is also found in E-cadherin complexes containing catenins.

REFERENCES

1. Reynolds, A.B., et al. 1992. p120, a novel substrate of protein tyrosine kinase receptors and of p60v-Src, is related to cadherin-binding factors β-catenin, plakoglobin and armadillo. Oncogene 7: 2439-2445.
2. Aghib, D.F. and McCrea, P.D. 1995. The E-cadherin complex contains the Src substrate p120. Exp. Cell Res. 218: 359-369.
3. Knudsen, K.A., et al. 1995. Interaction of α-actinin with the cadherin/catenin cell-cell adhesion complex via α-catenin. J. Cell Biol. 130: 67-77.
4. Pierceall, W.E., et al. 1995. Frequent alterations in E-cadherin and α- and β-catenin expression in human breast cancer cell lines. Oncogene 11: 1319-1326.
5. Sacco, P.A., et al. 1995. Identification of plakoglobin domains required for association with N-cadherin and α-catenin. J. Biol. Chem. 270: 20201-20206.

CHROMOSOMAL LOCATION

Genetic locus: Ctnnd1 (mouse) mapping to 2 D.

PRODUCT

p120 siRNA (m) is a target-specific 19-25 nt siRNA designed to knock down gene expression. Each vial contains 3.3 nmol of lyophilized siRNA, sufficient for a 10 µM solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see p120 shRNA Plasmid (m): sc-36140-SH and p120 shRNA (m) Lentiviral Particles: sc-36140-V as alternate gene silencing products.

STORAGE AND RESUSPENSION

Store lyophilized siRNA duplex at -20° C with desiccant. Stable for at least one year from the date of shipment. Once resuspended, store at -20° C, avoid contact with RNAses and repeated freeze thaw cycles.

Resuspend lyophilized siRNA duplex in 330 µl of the RNAse-free water provided. Resuspension of the siRNA duplex in 330 µl of RNAse-free water makes a 10 µM solution in a 10 µM Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

APPLICATIONS

p120 siRNA (m) is recommended for the inhibition of p120 expression in mouse cells.

SUPPORT REAGENTS

For optimal siRNA transfection efficiency, Santa Cruz Biotechnology's siRNA Transfection Reagent: sc-29528 (0.3 ml), siRNA Transfection Medium: sc-36868 (20 ml) and siRNA Dilution Buffer: sc-29527 (1.5 ml) are recommended. Control siRNAs or Fluorescein Conjugated Control siRNAs are available as 10 µM in 66 µl. Each contain a scrambled sequence that will not lead to the specific degradation of any known cellular mRNA. Fluorescein Conjugated Control siRNAs include: sc-36869, sc-44239, sc-44240 and sc-44241. Control siRNAs include: sc-37007, sc-44230, sc-44231, sc-44232, sc-44233, sc-44234, sc-44235, sc-44236, sc-44237 and sc-44238.

GENE EXPRESSION MONITORING

p120 (6H11): sc-23873 is recommended as a control antibody for monitoring of p120 gene expression knockdown by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) or immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor p120 gene expression knockdown using RT-PCR Primer: p120 (m)-PR: sc-36140-PR (20 µl, 447 bp). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

SELECT PRODUCT CITATIONS

1. Wang, Y.L., et al. 2011. Innate immune function of the adherens junction protein p120-catenin in endothelial response to endotoxin. J. Immunol. 186: 3180-3187.
2. Zhang, Y., et al. 2019. P120-catenin regulates pulmonary fibrosis and TGF-β induced lung fibroblast differentiation. Life Sci. 230: 35-44.

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.