

# p-p120 (pS288.47): sc-293002

## BACKGROUND

The catenins,  $\alpha$ ,  $\beta$  and  $\gamma$ , 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. A related protein, p120 [catenin (cadherin associated protein),  $\delta$  1], also known as cadherin-associated Src substrate, Ctnnd1, Cats or Ctnnd, is a 968 amino acid tyrosine kinase substrate belonging to the  $\beta$ -catenin family. Expressed in vascular endothelium, p120 localizes to the cytoplasm, nucleus and cell membrane. p120 plays a role in ligand-induced receptor signaling through EGF, PDGF, CSF-1 and Neu receptors, and exhibits sequence homology with the catenins at four discrete domains. p120 serves as a substrate for Src and is found in E-cadherin complexes containing catenins. p120 has four major isoforms, each of which has additional isoforms due to alternative splicing events. p120 contains ten ARM repeats and is phosphorylated following translation.

## 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  $\beta$ -catenin, plakoglobin and armadillo. *Oncogene* 7: 2439-2445.
2. Reynolds, A.B., et al. 1996. The gene encoding p120<sup>cas</sup>, a novel catenin, localizes on human chromosome 11q11 (CTNND) and mouse chromosome 2 (Cats). *Genomics* 31: 127-129.
3. Dillon, D.A., et al. 1998. The expression of p120<sup>ctn</sup> protein in breast cancer is independent of  $\alpha$ - and  $\beta$ -catenin and E-cadherin. *Am. J. Pathol.* 152: 75-82.
4. Keirsebilck, A., et al. 1998. Molecular cloning of the human p120<sup>ctn</sup> catenin gene (CTNND1): expression of multiple alternatively spliced isoforms. *Genomics* 50: 129-146.
5. Bonne, S., et al. 1998. Chromosomal mapping of human armadillo genes belonging to the p120<sup>ctn</sup>/plakophilin subfamily. *Genomics* 51: 452-454.
6. Perez-Moreno, M., et al. 2006. p120-catenin mediates inflammatory responses in the skin. *Cell* 124: 631-644.
7. Wildenberg, G.A., et al. 2006. p120-catenin and p190RhoGAP regulate cell-cell adhesion by coordinating antagonism between Rac and Rho. *Cell* 127: 1027-1039.

## CHROMOSOMAL LOCATION

Genetic locus: CTNND1 (human) mapping to 11q12.1; Ctnnd1 (mouse) mapping to 2 D.

## SOURCE

p-p120 (pS288.47) is a mouse monoclonal antibody raised against a short amino acid sequence containing Ser 288 phosphorylated p120 of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG<sub>1</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## APPLICATIONS

p-p120 (pS288.47) is recommended for detection of Ser 288 phosphorylated p120 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g of total protein (1 ml of cell lysate)] and immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

Suitable for use as control antibody for p120 siRNA (h): sc-36139, p120 siRNA (m): sc-36140, p120 siRNA (r): sc-106992, p120 shRNA Plasmid (h): sc-36139-SH, p120 shRNA Plasmid (m): sc-36140-SH, p120 shRNA Plasmid (r): sc-106992-SH, p120 shRNA (h) Lentiviral Particles: sc-36139-V, p120 shRNA (m) Lentiviral Particles: sc-36140-V and p120 shRNA (r) Lentiviral Particles: sc-106992-V.

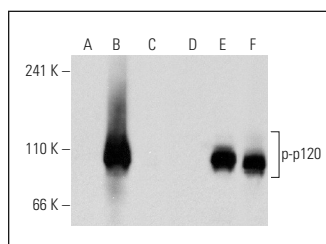
Molecular Weight of p-p120: 100-120 kDa.

Positive Controls: A-431 + Calyculin A cell lysate: sc-2260, p120 (h): 293 Lysate: sc-112342 or ECV304 + pervanadate cell lysate: sc-24672.

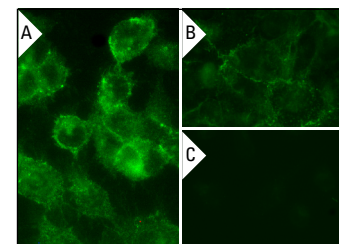
## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG $\kappa$  BP-HRP: sc-516102 or m-IgG $\kappa$  BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker<sup>™</sup> Molecular Weight Standards: sc-2035, TBS Blotto B Blocking Reagent: sc-2335 (use 50 mM NaF, sc-24988, as diluent), Lambda Phosphatase: sc-200312A 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 $\kappa$  BP-FITC: sc-516140 or m-IgG $\kappa$  BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz<sup>®</sup> Mounting Medium: sc-24941 or UltraCruz<sup>®</sup> Hard-set Mounting Medium: sc-359850.

## DATA



Western blot analysis of p120 phosphorylation in non-transfected: sc-110760 (A,D), untreated human p120 transfected: sc-112342 (B,E) and lambda protein phosphatase (sc-200312A) treated human p120 transfected: sc-112342 (C,F) 293 whole cell lysates. Antibodies tested include p-p120 (pS288.47): sc-293002 (A,B,C) and p120 (M-19): sc-1730 (D,E,F).



p-p120 (pS288.47): sc-293002. Immunofluorescence staining of methanol-fixed ECV304 cells treated with Pervanadate (Sodium Orthovanadate: sc-3540 + Hydrogen Peroxide: sc-203336) (A) untreated (B) and treated with Pervanadate and Lambda Phosphatase: sc-200312 (C).

## STORAGE

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

## RESEARCH USE

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