

GPS2 (N-15): sc-164541

BACKGROUND

The N-CoR-HDAC3 repressor complex inhibits the JNK pathway, which is involved in cell differentiation and apoptosis and responds to stress stimuli. G protein-pathway suppressor 2 (GPS2), also referred to as AMF1, is an integral component of the N-CoR-HDAC3 complex and functions to suppress G protein and MAP kinase-mediated signal transduction. The N-CoR complex inhibits the JNK pathway, a pathway that is involved in cell differentiation and apoptosis and responds to stress stimuli. TBL1, another component of the complex, interacts with GPS2 to form a heterotrimeric structure. GPS2 can also stimulate the activity of cellular transcription factors including the human papilloma virus E2 and E6 proteins, as well as p53. Amplified expression of GPS2 may augment p53-dependent transcription, causing a G₁ arrest in cells.

REFERENCES

- Jin, D.Y., Teramoto, H., Giam, C.Z., Chun, R.F., Gutkind, J.S. and Jeang, K.T. 1997. A human suppressor of c-Jun N-terminal kinase 1 activation by tumor necrosis factor α . *J. Biol. Chem.* 272: 25816-25823.
- Peng, Y.C., Breiding, D.E., Sverdrup, F., Richard, J. and Androphy, E.J. 2000. AMF1/GPS2 binds p300 and enhances its interaction with papillomavirus E2 proteins. *J. Virol.* 74: 5872-5879.
- Degenhardt, Y.Y. and Silverstein, S.J. 2001. GPS2, a protein partner for human papillomavirus E6 proteins. *J. Virol.* 75: 151-160.
- Peng, Y.C., Kuo, F., Breiding, D.E., Wang, Y.F., Mansur, C.P. and Androphy, E.J. 2001. AMF1 (GPS2) modulates p53 transactivation. *Mol. Cell. Biol.* 21: 5913-5924.
- Zhang, J., Kalkum, M., Chait, B.T. and Roeder, R.G. 2002. The N-CoR-HDAC3 nuclear receptor corepressor complex inhibits the JNK pathway through the integral subunit GPS2. *Mol. Cell* 9: 611-623.
- Online Mendelian Inheritance in Man, OMIM[™]. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 6019. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
- Diederichs, S., Bäumer, N., Ji, P., Metzelder, S.K., Idos, G.E., Cauvet, T., Wang, W., Möller, M., Pierschalski, S., Gromoll, J., Schrader, M.G., Koeffler, H.P., Berdel, W.E., Serve, H. and Müller-Tidow, C. 2004. Identification of interaction partners and substrates of the cyclin A1-CDK2 complex. *J. Biol. Chem.* 279: 33727-33741.
- Lee, T.H., Yi, W., Griswold, M.D., Zhu, F. and Her, C. 2005. Formation of hMSH4-hMSH5 heterocomplex is a prerequisite for subsequent GPS2 recruitment. *DNA Repair* 5: 32-42.

CHROMOSOMAL LOCATION

Genetic locus: GPS2 (human) mapping to 17p13.1; Gps2 (mouse) mapping to 11 B3.

SOURCE

GPS2 (N-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of GPS2 of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-164541 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

GPS2 (N-15) is recommended for detection of GPS2 of mouse, rat and human 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); non cross-reactive with GPS1.

GPS2 (N-15) is also recommended for detection of GPS2 in additional species, including canine, bovine and porcine.

Suitable for use as control antibody for GPS2 siRNA (h): sc-93692, GPS2 siRNA (m): sc-145743, GPS2 shRNA Plasmid (h): sc-93692-SH, GPS2 shRNA Plasmid (m): sc-145743-SH, GPS2 shRNA (h) Lentiviral Particles: sc-93692-V and GPS2 shRNA (m) Lentiviral Particles: sc-145743-V.

Molecular Weight of GPS2: 40 kDa.

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

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.

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.

PROTOCOLS

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



Try **GPS2 (1E2): sc-69707**, our highly recommended monoclonal alternative to GPS2 (N-15).