SANTA CRUZ BIOTECHNOLOGY, INC.

NDR2 (h3): 293 Lysate: sc-158755

BACKGROUND

The nuclear Dbf2-related kinases (NDR1 and NDR2) participate in the regulation of cell division and morphology, and may be implicated in tumor progression. NDR1 and NDR2 share 86% amino acid identity, but differ in their expression pattern. NDR1 localizes to the nucleus, while NDR2 exhibits punctate cytoplasmic distribution. Also, NDR1 expression appears highest in spleen, lung and thymus, whereas NDR2 shows highest expression in the gastrointestinal tract. However, both NDR1 and NDR2 are regulated by phosphorylation and by the Ca^{2+}-binding protein S100B. NDR1 and NDR2 may also play a role in the HIV-1 life cycle. Both proteins are cleaved by the HIV-1 protease (PR), which inhibits their enzymatic activity and alters the subcellular localization of NDR2. The genes encoding human NDR1 and NDR2 map to chromosomes 6p21 and 12p11.23, respectively.

REFERENCES

1. Tamaskovic, R., Bichsel, S.J., Rogniaux, H., Stegert, M.R. and Hemmings, B.A. 2003. Mechanism of Ca^{2+}-mediated regulation of NDR protein kinase through autophosphorylation and phosphorylation by an upstream kinase. J. Biol. Chem. 278: 6710-6718.
2. Stegert, M.R., Tamaskovic, R., Bichsel, S.J., Hergovich, A. and Hemmings, B.A. 2004. Regulation of NDR2 protein kinase by multi-site phosphorylation and the S100B calcium-binding protein. J. Biol. Chem. 279: 23806-23812.
3. Devroe, E., Erdjument-Bromage, H., Tempst, P. and Silver, P.A. 2004. Human Mob proteins regulate the NDR1 and NDR2 serine-threonine kinases. J. Biol. Chem. 279: 24444-24451.
4. Bichsel, S.J., Tamaskovic, R., Stegert, M.R. and Hemmings, B.A. 2004. Mechanism of activation of NDR (nuclear Dbf2-related) protein kinase by the hMOB1 protein. J. Biol. Chem. 279: 35228-35235.
5. Devroe, E., Silver, P.A. and Engelman, A. 2005. HIV-1 incorporates and proteolytically processes human NDR1 and NDR2 serine-threonine kinases. Virology 331: 181-189.

CHROMOSOMAL LOCATION

Genetic locus: STK38L (human) mapping to 12p11.23.

PRODUCT

NDR2 (h3): 293 Lysate represents a lysate of human NDR2 transfected 293 cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

APPLICATIONS

NDR2 (h3): 293 Lysate is suitable as a Western Blotting positive control for human reactive NDR2 antibodies. Recommended use: 10-20 µl per lane.

Control 293 Lysate: sc-110760 is available as a Western Blotting negative control lysate derived from non-transfected 293 cells.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. 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 for detailed protocols and support products.