SANTA CRUZ BIOTECHNOLOGY, INC.

NDR2 (K-22): sc-130824

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The Power to Question

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., et al. 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., et al. 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., et al. 2004. Human Mob proteins regulate the NDR1 and NDR2 serine-threonine kinases. J. Biol. Chem. 279: 24444-24451.
4. Bichsel, S.J., et al. 2004. Mechanism of activation of NDR (nuclear Dbf2-related) protein kinase by the hMOB1 protein. J. Biol. Chem. 279: 35228-35235.
5. Devroe, E., et al. 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.

SOURCE

NDR2 (K-22) is a purified rabbit polyclonal antibody raised against a peptide mapping near the C-terminus of NDR2 of human origin.

PRODUCT

Each vial contains 100 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

STORAGE

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

PROTOCOLS

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

APPLICATIONS

NDR2 (K-22) is recommended for detection of NDR2 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)] and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for NDR2 siRNA (h): sc-45828, NDR2 shRNA Plasmid (h): sc-45828-SH and NDR2 shRNA (h) Lentiviral Particles: sc-45828-V.

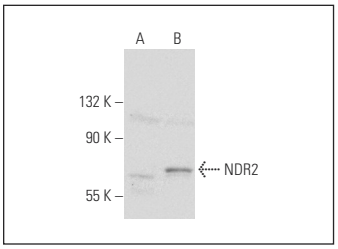
Molecular Weight of NDR2: 54 kDa.

Positive Controls: NDR2 (h3): 293 Lysate: sc-158755, T-47D cell lysate: sc-2293 or Jurkat whole cell lysate: sc-2204.

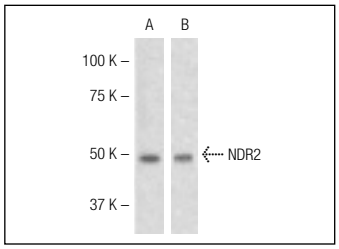
RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml).

DATA



NDR2 (K-22): sc-130824. Western blot analysis of NDR2 expression in non-transfected: sc-110760 (**A**) and human NDR2 transfected: sc-158755 (**B**) 293 whole cell lysates.



NDR2 (K-22): sc-130824. Western blot analysis of NDR2 expression in Jurkat (**A**) and T-47D (**B**) whole cell lysates.

RESEARCH USE

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