SANTA CRUZ BIOTECHNOLOGY, INC.

Skp2 p45 (N-19): sc-1567

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

The critical role that the family of regulatory proteins known as cyclins plays in eukaryotic cell cycle regulation is well established. The best characterized cyclin complex is the mitotic cyclin B/Cdc2 p34 kinase, the active component of MPF (maturation promoting factor). Cyclin A accumulates prior to cyclin B in the cell cycle, appears to be involved in control of S phase and has been shown to associate with cyclin dependent kinase-2 (Cdk2). In addition, cyclin A has been implicated in cell transformation and is found in complexes with E1A, transcription factors DP-1 and E2F and retinoblastoma protein p110. Two cyclin A-Cdk2 complex binding proteins, Skp1 p19 and Skp2 p45, have been described. Although the Skps (S phase kinase-associated proteins) associate with the active cyclin A-Cdk2 complex, they do not exhibit any regulatory effects on the complex. Abolition of Skp2 p45 function by either microinjection of anti-p45 antibodies or addition of antisense oligonucleo-tides prevents entry into S phase of both normal and transformed cells.

CHROMOSOMAL LOCATION

Genetic locus: SKP2 (human) mapping to 5p13.2; Skp2 (mouse) mapping to 15 A2.

SOURCE

Skp2 p45 (N-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of Skp2 p45 of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-1567 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Skp2 p45 (N-19) is recommended for detection of Skp2 p45 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)], 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).

Suitable for use as control antibody for Skp2 p45 siRNA (h): sc-36499, Skp2 p45 shRNA Plasmid (h): sc-36499-SH and Skp2 p45 shRNA (h) Lentiviral Particles: sc-36499-V.

Molecular Weight of Skp2 p45: 45 kDa.

Positive Controls: Jurkat nuclear extract: sc-2132, K-562 nuclear extract: sc-2130 or MCF7 nuclear extract: sc-2149.

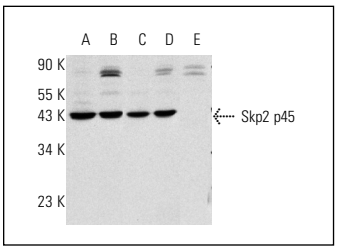
STORAGE

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

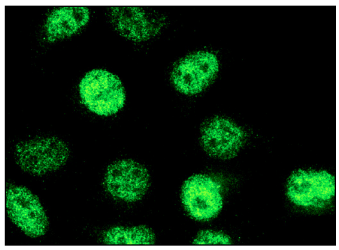
RESEARCH USE

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

DATA



Skp2 p45 (N-19): sc-1567. Western blot analysis of Skp2 p45 expression in A-673 (**A**), K-562 (**B**), Jurkat (**C**), MCF7 (**D**) and KNRK (**E**) nuclear extracts.



Skp2 p45 (N-19): sc-1567. Immunoflourescence staining of methanol-fixed HeLa cells showing neclear localization.

SELECT PRODUCT CITATIONS

1. Ng, R.W., et al. 1998. Characterization of the cullin and F-box protein partner Skp1. FEBS Lett. 438: 183-189.
2. Tomoda, K., et al. 2004. Multiple functions of Jab1 are required for early embryonic development and growth potential in mice. J. Biol. Chem. 279: 43013-43018.
3. Chew, E.H. and Hagen, T. 2007. Substrate-mediated regulation of cullin neddylation. J. Biol. Chem. 282: 17032-17040.
4. Chew, E.H., et al. 2007. Characterization of cullin-based E3 ubiquitin ligases in intact mammalian cells—evidence for cullin dimerization. Cell Signal. 19: 1071-1080.
5. Xu, S., et al. 2007. Substrate recognition and ubiquitination of SCFSkp2/Cks1 ubiquitin-protein isopeptide ligase. J. Biol. Chem. 282: 15462-15470.
6. Chen, G., et al. 2010. The tumor suppressor ING3 is degraded by SCFSkp2-mediated ubiquitin-proteasome system. Oncogene 29: 1498-1508.
7. Hsu, J.D., et al. 2011. Gallic acid induces G_2/M phase arrest of breast cancer cell MCF-7 through stabilization of $p27^{Kip1}$ attributed to disruption of $p27^{Kip1/Skp2}$ complex. J. Agric. Food Chem. 59: 1996-2003.
8. Chua, Y.S., et al. 2011. Regulation of cullin RING E3 ubiquitin ligases by CAND1 *in vivo*. PLoS ONE 6: e16071.
9. Lin, M.C., et al. 2015. Protocatechuic acid inhibits oleic acid-induced vascular smooth muscle cell proliferation through activation of AMP-activated protein kinase and cell cycle arrest in G_0/G_1 phase. J. Agric. Food Chem. 63: 235-241.