SANTA CRUZ BIOTECHNOLOGY, INC.

Skp2 p45 (A-2): sc-74477

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 oligonucleotides prevents entry into S phase of both normal and transformed cells.

REFERENCE

1. Draetta, G., et al. 1989. cdc2 protein kinase is complexed with both cyclin A and B: evidence for proteolytic inactivation of MPF. Cell 56: 829-838.
2. Giordano, A., et al. 1989. A 60 kd cdc2-associated polypeptide complexes with the E1A proteins in adenovirus-infected cells. Cell 58: 981-990.

CHROMOSOMAL LOCATION

Genetic locus: SKP2 (human) mapping to 5p13.2; Skp2 (mouse) mapping to 15 A1.

SOURCE

Skp2 p45 (A-2) is a mouse monoclonal antibody raised against amino acids 1-435 representing full length Skp2 p45 of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2b} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin. Also available as TransCruz reagent for ChIP application, sc-74477 X, 200 µg/0.1 ml.

Skp2 p45 (A-2) is available conjugated to agarose (sc-74477 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-74477 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-74477 PE), fluorescein (sc-74477 FITC), Alexa Fluor® 488 (sc-74477 AF488), Alexa Fluor® 546 (sc-74477 AF546), Alexa Fluor® 594 (sc-74477 AF594) or Alexa Fluor® 647 (sc-74477 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-74477 AF680) or Alexa Fluor® 790 (sc-74477 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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.

APPLICATIONS

Skp2 p45 (A-2) is recommended for detection of Skp2 p45 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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).

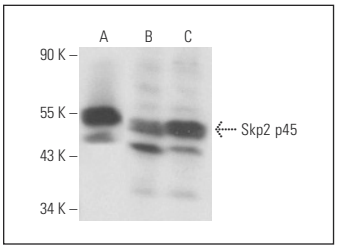
Suitable for use as control antibody for Skp2 p45 siRNA (h): sc-36499, Skp2 p45 siRNA (m): sc-36500, Skp2 p45 siRNA (r): sc-270333, Skp2 p45 shRNA Plasmid (h): sc-36499-SH, Skp2 p45 shRNA Plasmid (m): sc-36500-SH, Skp2 p45 shRNA Plasmid (r): sc-270333-SH, Skp2 p45 shRNA (h) Lentiviral Particles: sc-36499-V, Skp2 p45 shRNA (m) Lentiviral Particles: sc-36500-V and Skp2 p45 shRNA (r) Lentiviral Particles: sc-270333-V.

Skp2 p45 (A-2) X TransCruz antibody is recommended for ChIP assays.

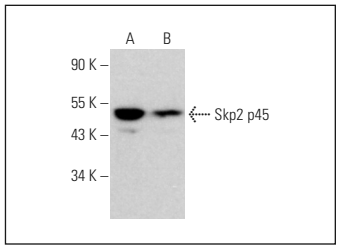
Molecular Weight of Skp2 p45: 45 kDa.

Positive Controls: A-673 nuclear extract: sc-2128, K-562 nuclear extract: sc-2130 or SK-N-MC cell lysate: sc-2237.

DATA



Skp2 p45 (A-2): sc-74477. Western blot analysis of Skp2 p45 expression in SK-N-MC whole cell lysate (**A**) and A-673 (**B**) and K-562 (**C**) nuclear extracts.



Skp2 p45 (A-2): sc-74477. Western blot analysis of Skp2 p45 expression in IMR-32 (**A**) and SJRH30 (**B**) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Li, X., et al. 2009. Inhibitor of growth 4 induces growth suppression and apoptosis in glioma U87MG. Pathobiology 76: 181-192.
2. Kullmann, M.K., et al. 2013. The p27-Skp2 axis mediates glucocorticoid-induced cell cycle arrest in T-lymphoma cells. Cell Cycle 12: 2625-2635.
3. Tsai, Y.S., et al. 2014. The role of homeostatic regulation between tumor suppressor DAB2IP and oncogenic Skp2 in prostate cancer growth. Oncotarget 5: 6425-6436.
4. Heijink, A.M., et al. 2015. A haploid genetic screen identifies the G_1/S regulatory machinery as a determinant of Wee1 inhibitor sensitivity. Proc. Natl. Acad. Sci. USA 112: 15160-15165.
5. Nagashima, K., et al. 2017. Nutrient-induced FNIP degradation by SCFβ-TRCP regulates FLCN complex localization and promotes renal cancer progression. Oncotarget 8: 9947-9960.

PROTOCOLS

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