SANTA CRUZ BIOTECHNOLOGY, INC.

Skp2 p45 (H-435): sc-7164

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.

CHROMOSOMAL LOCATION

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

SOURCE

Skp2 p45 (H-435) is a rabbit polyclonal antibody raised against amino acids 1-424 representing full length 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.

Available as TransCruz reagent for ChIP application, sc-7164 X, 200 µg/0.1 ml.

APPLICATIONS

Skp2 p45 (H-435) is recommended for detection of Skp2 p45 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:50-1:500), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:25, dilution range 1:25-1:250), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:25, dilution range 1:25-1:250) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Skp2 p45 (H-435) is also recommended for detection of Skp2 p45 in additional species, including equine, canine, bovine and porcine.

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

Skp2 p45 (H-435) X TransCruz antibody is recommended for ChIP assays.

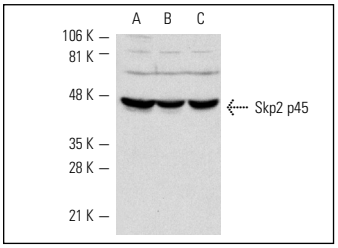
Molecular Weight of Skp2 p45: 45 kDa.

Positive Controls: A-673 cell lysate: sc-2414, HeLa whole cell lysate: sc-2200 or K-562 whole cell lysate: sc-2203.

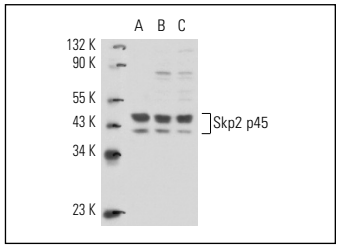
STORAGE

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

DATA



Skp2 p45 (H-435): sc-7164. Western blot analysis of Skp2 p45 expression in A-673 (**A**), HeLa (**B**) and K-562 (**C**) whole cell lysates.



Skp2 p45 (H-435): sc-7164. 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.

SELECT PRODUCT CITATIONS

1. Malek, N.P., et al. 2001. A mouse knock-in model exposes sequential proteolytic pathways that regulate $p27^{Kip1}$ in G_1 and S phase. Nature 413: 323-327.
2. Chen, J.Y., et al. 2011. Bcr-Abl-induced tyrosine phosphorylation of Emi1 to stabilize Skp2 protein via inhibition of ubiquitination in chronic myeloid leukemia cells. J. Cell. Physiol. 226: 407-413.
3. Bretones, G., et al. 2011. SKP2 oncogene is a direct MYC target gene and MYC down-regulates $p27^{Kip1}$ through SKP2 in human leukemia cells. J. Biol. Chem. 286: 9815-9825.
4. Bustany, S., et al. 2011. Cyclin D1 regulates $p27^{Kip1}$ stability in B cells. Cell. Signal. 23: 171-179.
5. Schiappacassi, M., et al. 2011. Role of T198 modification in the regulation of $p27^{Kip1}$ protein stability and function. PLoS ONE 6: e17673.
6. Burrows, A.C., et al. 2012. Skp1-Cul1-F-box ubiquitin ligase (SCF(βTrCP))-mediated destruction of the ubiquitin-specific protease USP37 during G2-phase promotes mitotic entry. J. Biol. Chem. 287: 39021-39029.
7. Dey, P., et al. 2012. Estrogen receptors β1 and β2 have opposing roles in regulating proliferation and bone metastasis genes in the prostate cancer cell line PC3. Mol. Endocrinol. 26: 1991-2003.
8. Jiang, J., et al. 2012. Androgens repress expression of the F-box protein Skp2 via p107 dependent and independent mechanisms in LNCaP prostate cancer cells. Prostate 72: 225-232.
9. Diersch, S., et al. 2013. Efemp1 and $p27^{Kip1}$ modulate responsiveness of pancreatic cancer cells towards a dual PI3K/mTOR inhibitor in preclinical models. Oncotarget 4: 277-288.

RESEARCH USE

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