abcam

ab216687

Anti-SKP2 antibody

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	pH: 7.4 Preservative: 0.02% Proclin 300 Constituents: 50% Glycerol (glycerin, glycerine), 48.98% TBS, 1X, 1% BSA
Form	Liquid
Clonality	Polyclonal
Immunogen	Synthetic Peptide within Human SKP2 aa 350-450 conjugated to Keyhole Limpet Haemocyanin. The exact immunogen used to generate this antibody is proprietary information. Database link Q13309
Purification technique	Affinity purification Protein A
Concentration	1 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

WB

Tested

Species	Human
Dilution info	1/500
Notes	-

Predicted

Species	Mouse, Rat
Dilution info	-
Notes	-

IHC-P

Tested

Species	Human
Dilution info	1/100 - 1/500
Notes	-

Predicted

Species	Mouse, Rat
Dilution info	-
Notes	-

ICC/IF

Tested

Species	Human
Dilution info	1/500
Notes	-

Predicted

Species	Mouse, Rat
Dilution info	-
Notes	-

Flow Cyt (Intra)

Tested

Species	Human

Dilution info	-
Notes	-

Predicted

Species	Mouse, Rat
Dilution info	-
Notes	-

Target data

See full target information SKP2

Function

Substrate recognition component of a SCF (SKP1-CUL1-F-box protein) E3 ubiquitin-protein ligase complex which mediates the ubiquitination and subsequent proteasomal degradation of target proteins involved in cell cycle progression, signal transduction and transcription (PubMed:9736735, PubMed:11931757, PubMed:12435635, PubMed:12769844, PubMed:12840033, PubMed:15342634, PubMed:15668399, PubMed:15949444, PubMed:16103164, PubMed:16262255, PubMed:16581786, PubMed:16951159, PubMed:17908926, PubMed:17962192, PubMed:22464731, PubMed:22770219, PubMed:32267835). Specifically recognizes phosphorylated CDKN1B/p27kip and is involved in regulation of G1/S transition (By similarity). Degradation of CDKN1B/p27kip also requires CKS1 (By similarity). Recognizes target proteins ORC1, CDT1, RBL2, KMT2A/MLL1, CDK9, RAG2, NBN, FOXO1, UBP43, YTHDF2, and probably MYC, TOB1 and TAL1 (PubMed:11931757, PubMed:12435635, PubMed:12769844, PubMed:12840033, PubMed:15342634, PubMed:15668399, PubMed:15949444, PubMed:16103164, PubMed:16581786, PubMed:16951159, PubMed:17908926, PubMed:17962192, PubMed:22464731, PubMed:32267835). Degradation of TAL1 also requires STUB1 (PubMed:17962192). Recognizes CDKN1A in association with CCNE1 or CCNE2 and CDK2 (PubMed:9736735, PubMed:16262255). Promotes ubiquitination and destruction of CDH1 in a CK1-dependent manner, thereby regulating cell migration (PubMed:22770219). Following phosphorylation in response to DNA damage, mediates 'Lys-63'-linked ubiquitination of NBN, promoting ATM recruitment to DNA damage sites and DNA repair via homologous recombination (PubMed:22464731). Through the ubiquitin-mediated proteasomal degradation of hepatitis C virus non-structural protein 5A, has an antiviral activity towards that virus.

Storage

Shipped at conditions	Blue Ice
Appropriate short-term storage duration	1-2 weeks

Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	-20°C
Aliquoting information	Upon delivery aliquot
Storage information	Avoid freeze / thaw cycle

Supplementary info

This supplementary information is collated from multiple sources and compiled automatically.

Activity summary	S-phase kinase-associated protein 2 (SKP2) also known as FBL1 or p45 is an E3 ubiquitin ligase that tags proteins for degradation. It weighs around 48 kDa. SKP2 facilitates the transition from the G1 to S phase of the cell cycle by targeting cyclin-dependent kinase inhibitors for proteasomal destruction. Expressed in various tissues including key roles in proliferating cells SKP2 ensures the regulation of cell cycle progression and stability.
Biological function summary	SKP2 is part of the SCF (SKP1-CUL1-F-box) complex which is instrumental in controlling cell cycle and cell division. It regulates the degradation of p27^Kip1 and other cell cycle regulators. By modulating proteolysis SKP2 contributes to the maintenance of cell proliferation and it has essential roles in cellular responses to growth signals. Moreover SKP2 influences processes such as DNA replication through its effect on substrate interaction and ubiquitination.
Pathways	SKP2 functions inside the ubiquitin-proteasome system and impacts the PI3K/AKT signaling pathway. SKP2 advances cell cycle progression by associating with proteins like p27^Kip1 and CDK2 facilitating cell division. It modulates the phosphorylation state of numerous targets influencing signaling processes that control cell growth. This involvement aligns SKP2 with key cellular pathways that maintain cell survival and metabolic balance.
Associated diseases and disorders	SKP2 plays an important role in cancer and cardiovascular diseases. In various cancers the aberrant expression of SKP2 connects to excessive cell proliferation and tumor growth partially through interactions with oncoproteins like Myc. In cardiovascular conditions SKP2 influences cardiac hypertrophy and might link to proteins such as cyclin-dependent kinase inhibitors. The regulation by SKP2 affects these proteins' stability impacting disease progression and potential therapeutic interventions.

Product promise

Tested

We have tested this species and application combination and it works. It is covered by our product promise.

Expected

We have not tested this specific species and application combination in-house, but expect it will work. It is covered by our product promise.

Predicted

This species and application combination has not been tested, but we predict it will work based on strong homology. However, this combination is not covered by our product promise.

Not recommended

We do not recommend this combination. It is not covered by our product promise.

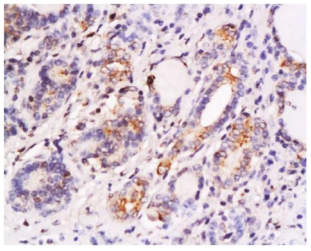
We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

In the unlikely event of one of our products not working as expected, you are covered by our product promise.

Full details and terms and conditions can be found here:
Terms & Conditions.

---

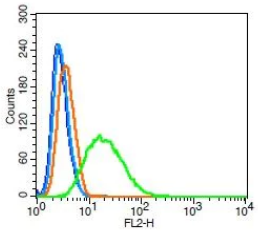
4 product images



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-SKP2 antibody (ab216687)

SKP2 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-SKP2 antibody

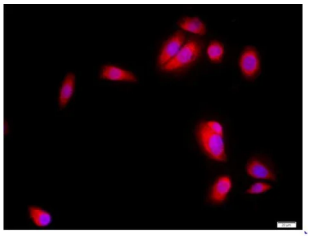
Immunohistochemical analysis of formalin-fixed, paraffin-embedded Human thyroid carcinoma tissue labeling SKP2 with ab216687 at 1/200 dilution, followed by conjugation to the secondary antibody and DAB staining.



Flow Cytometry (Intracellular) - Anti-SKP2 antibody (ab216687)

SKP2 Flow Cytometry (Intracellular) staining using rabbit Anti-SKP2 antibody

Intracellular flow cytometric analysis of HeLa cells labeling SKP2 with ab 216687 at 1/100 dilution for 30 minutes followed by a PE conjugated secondary antibody (green), compared to unstained cells (blue), secondary only (light blue), and an isotype control (orange).

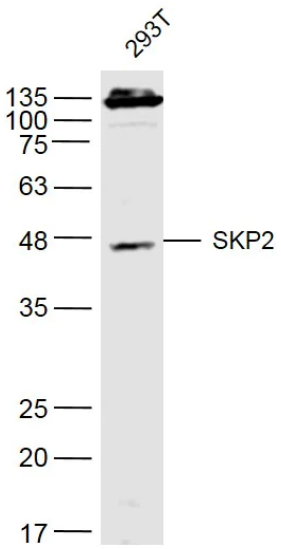


Immunocytochemistry/ Immunofluorescence - Anti-SKP2 antibody (ab216687)

SKP2 Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-SKP2 antibody

Immunofluorescent analysis of MCF-7 cells labeling SKP2 with ab216687 at 1/500 dilution in PBS for two hours at 37°C, followed by Goat anti-rabbit IgG (H+L), Cy3 conjugated secondary antibody. The nucleus was stained with DAPI.

Western blot - Anti-SKP2 antibody (ab216687)



All lanes:
Western blot - Anti-SKP2 antibody (ab216687) at 1/500 dilution

All lanes:
293T lysates

Secondary

All lanes:
Conjugated secondary antibody at 1/10000 dilution

Predicted band size: 47 kDa

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.