abcam

Product datasheet

Anti-SP1 antibody ab227383

32 References 7 图像

概述

产品名称	Anti-SP1抗体
描述	**兔多克隆抗体**to SP1
宿主	Rabbit
经测试应用	**适用于:** WB, IP, IHC-P, ChIP, ICC/IF
种属反应性	**与反应:** Mouse, Human **预测可用于:** Cow, Rhesus monkey
免疫原	Recombinant fragment within Human SP1 (internal sequence). The exact sequence is proprietary. Database link: **P08047**
阳性对照	WB: HEK-293T and THP-1 whole cell lysate. ICC/IF: HeLa cells. IHC: HeLa and C2C12 xenografts. IP: THP-1 whole cell lysate. ChIP: HEK-293T chromatin extract.
常规说明	The Life Science industry has been in the grips of a reproducibility crisis for a number of years. Abcam is leading the way in addressing this with our range of recombinant monoclonal antibodies and knockout edited cell lines for gold-standard validation. Please check that this product meets your needs before purchasing. If you have any questions, special requirements or concerns, please send us an inquiry and/or contact our Support team ahead of purchase. Recommended alternatives for this product can be found below, along with publications, customer reviews and Q&As

性能

形式	Liquid
存放说明	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C long term. Avoid freeze / thaw cycle.
存储溶液	pH: 7.00 Preservative: 0.025% Proclin 300 Constituents: 79% PBS, 20% Glycerol (glycerin, glycerine)
纯度	Immunogen affinity purified
克隆	**多克隆**
同种型	IgG

应用

The Abpromise guarantee **Abpromise™承诺保证使用ab227383于以下的经测试应用**

"应用说明"部分 下显示的仅为推荐的起始稀释度;实际最佳的稀释度/浓度应由使用者检定。

应用	Ab评论	说明
WB		1/500 - 1/20000.
IP		1/100 - 1/500.
IHC-P		1/100 - 1/1000.
ChIP		Use at an assay dependent concentration.
ICC/IF		1/100 - 1/1000.

靶标

功能 Transcription factor that can activate or repress transcription in response to physiological and pathological stimuli. Binds with high affinity to GC-rich motifs and regulates the expression of a large number of genes involved in a variety of processes such as cell growth, apoptosis, differentiation and immune responses. Highly regulated by post-translational modifications (phosphorylations, sumoylation, proteolytic cleavage, glycosylation and acetylation). Binds also the PDGFR-alpha G-box promoter. May have a role in modulating the cellular response to DNA damage. Implicated in chromatin remodeling. Plays a role in the recruitment of SMARCA4/BRG1 on the c-FOS promoter. Plays an essential role in the regulation of FE65 gene expression. In complex with ATF7IP, maintains telomerase activity in cancer cells by inducing TERT and TERC gene expression.

组织特异性 Up-regulated in adenocarcinomas of the stomach (at protein level).

序列相似性 Belongs to the Sp1 C2H2-type zinc-finger protein family.
Contains 3 C2H2-type zinc fingers.

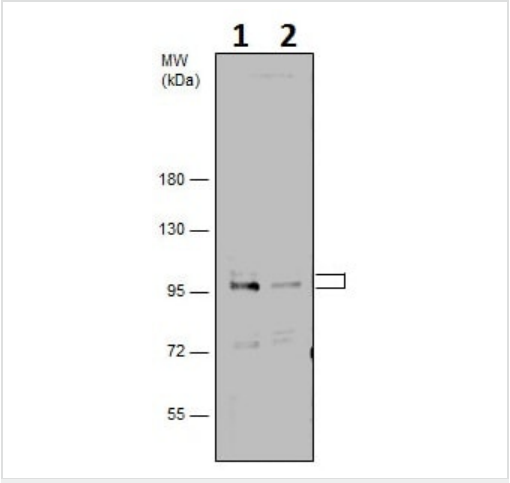
翻译后修饰 Phosphorylated on multiple serine and threonine residues. Phosphorylation is coupled to ubiquitination, sumoylation and proteolytic processing. Phosphorylation on Ser-59 enhances proteolytic cleavage. Phosphorylation on Ser-7 enhances ubiquitination and protein degradation. Hyperphosphorylation on Ser-101 in response to DNA damage has no effect on transcriptional activity. MAPK1/MAPK3-mediated phosphorylation on Thr-453 and Thr-739 enhances VEGF transcription but, represses FGF2-triggered PDGFR-alpha transcription. Also implicated in the repression of RECK by ERBB2. Hyperphosphorylated on Thr-278 and Thr-739 during mitosis by MAPK8 shielding SP1 from degradation by the ubiquitin-dependent pathway. Phosphorylated in the zinc-finger domain by calmodulin-activated PKCzeta. Phosphorylation on Ser-641 by PKCzeta is critical for TSA-activated LHR gene expression through release of its repressor, p107. Phosphorylation on Thr-668, Ser-670 and Thr-681 is stimulated by angiotensin II via the AT1 receptor inducing increased binding to the PDGF-D promoter. This phosphorylation is increased in injured artey wall. Ser-59 and Thr-681 can both be dephosphorylated by PP2A during cell-cycle interphase. Dephosphorylation on Ser-59 leads to increased chromatin association during interphase and increases the transcriptional activity. On insulin stimulation, sequentially glycosylated and phosphorylated on several C-terminal serine and threonine residues.
Acetylated. Acetylation/deacetylation events affect transcriptional activity. Deacetylation leads to

an increase in the expression the 12(s)-lipooxygenase gene though recruitment of p300 to the promoter.
Ubiquitinated. Ubiquitination occurs on the C-terminal proteolytically-cleaved peptide and is triggered by phosphorylation.
Sumoylated by SUMO1. Sumoylation modulates proteolytic cleavage of the N-terminal repressor domain. Sumoylation levels are attenuated during tumorigenesis. Phosphorylation mediates SP1 desumoylation.
Proteolytic cleavage in the N-terminal repressor domain is prevented by sumoylation. The C-terminal cleaved product is susceptible to degradation.
O-glycosylated; contains at least 8 N-acetylglucosamine side chains. Levels are controlled by insulin and the SP1 phosphorylation states. Insulin-mediated O-glycosylation locates SP1 to the nucleus, where it is sequentially deglycosylated and phosphorylated. O-glycosylation affects transcriptional activity through disrupting the interaction with a number of transcription factors including ELF1 and NFYA. Also inhibits interaction with the HIV1 promoter. Inhibited by peroxisomome proliferator receptor gamma (PPARgamma).

细胞定位

Nucleus. Cytoplasm. Nuclear location is governed by glycosylated/phosphorylated states. Insulin promotes nuclear location, while glucagon favors cytoplasmic location.

图片



Western blot - Anti-SP1 antibody (ab227383)

All lanes : Anti-SP1 antibody (ab227383) at 1/10000 dilution

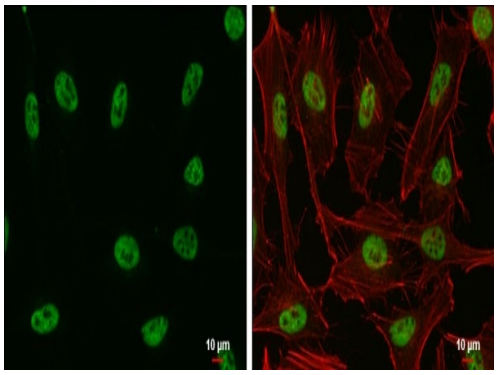
Lane 1 : Non-transfected HEK-293T (human epithelial cell line from embryonic kidney transformed with large T antigen) whole cell lysate
Lane 2 : SP1 shRNA transfected HEK-293T whole cell lysate

Lysates/proteins at 50 µg per lane.

Secondary
All lanes : HRP-conjugated anti-rabbit IgG

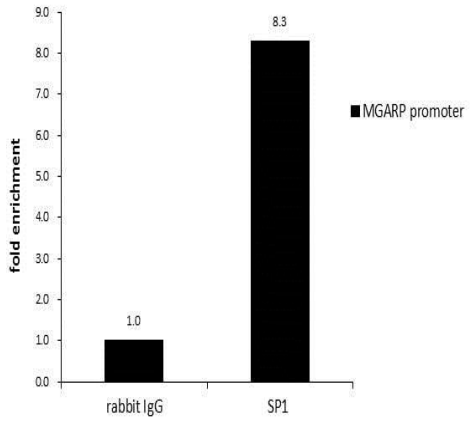
Developed using the ECL technique.

Performed under reducing conditions.



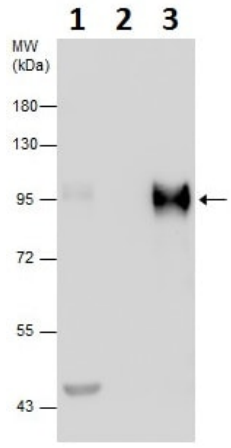
Immunocytochemistry/ Immunofluorescence - Anti-SP1 antibody (ab227383)

HeLa (human epithelial cell line from cervix adenocarcinoma) cells stained for SP1 (green) using ab227383 at 1/500 dilution in ICC/IF. Cells were fixed in 4% paraformaldehyde at RT for 15 minutes. Red: phalloidin, a cytoskeleton marker, diluted at 1/200.



ChIP - Anti-SP1 antibody (ab227383)

ChIP was performed with HEK-293T (human epithelial cell line from embryonic kidney transformed with large T antigen)chromatin extract and 5 µg of either normal rabbit IgG or anti-SP1 antibody. The precipitated DNA was detected by PCR with primer set targeting to MGARP promoter.



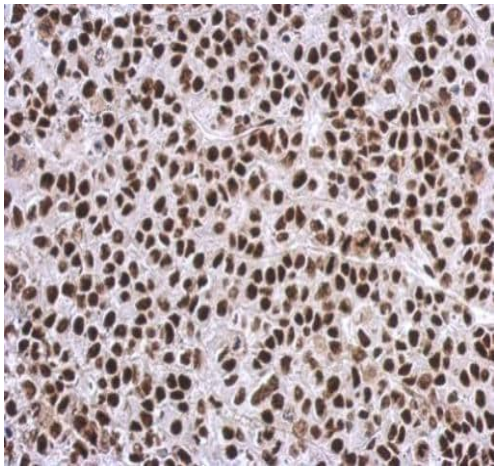
Immunoprecipitation - Anti-SP1 antibody (ab227383)

SP1 was immunoprecipitated from THP-1 (human monocytic leukemia cell line) whole cell lysate with ab227383. Western blot was performed from the immunoprecipitate using ab227383. Anti-rabbit IgG was used as secondary antibody.

Lane 1: THP-1 whole cell lysate (Input).

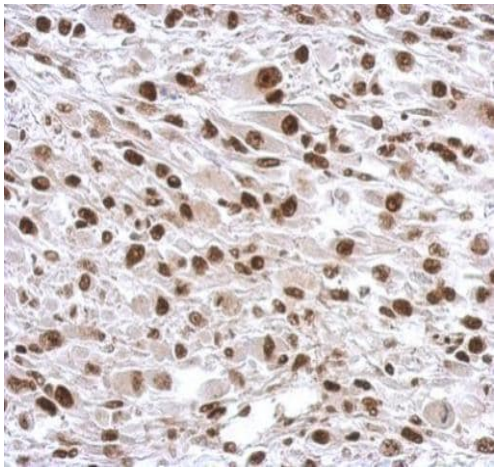
Lane 2: Rabbit IgG instead of ab227383 in THP-1 whole cell lysate.

Lane 3: ab227383 IP in THP-1 whole cell lysate.



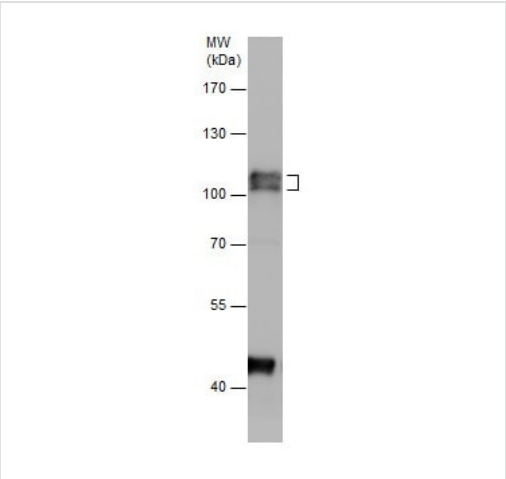
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-SP1 antibody (ab227383)

Paraffin-embedded HeLa (human epithelial cell line from cervix adenocarcinoma) xenograft stained for SP1 using ab227383 at 1/500 dilution in immunohistochemical analysis.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-SP1 antibody (ab227383)

Paraffin-embedded C2C12 (mouse myoblast cell line) xenograft stained for SP1 using ab227383 at 1/500 dilution in immunohistochemical analysis.



Western blot - Anti-SP1 antibody (ab227383)

Anti-SP1 antibody (ab227383) at 1/2000 dilution + THP-1 (human monocytic leukemia cell line) whole cell lysate at 30 µg

Secondary

HRP-conjugated anti-rabbit IgG

Developed using the ECL technique.

Performed under reducing conditions.

7.5% SDS-PAGE

Our Abpromise to you: Quality guaranteed and expert technical support

- Replacement or refund for products not performing as stated on the datasheet
- Valid for 12 months from date of delivery
- Response to your inquiry within 24 hours
- We provide support in Chinese, English, French, German, Japanese and Spanish
- Extensive multi-media technical resources to help you
- We investigate all quality concerns to ensure our products perform to the highest standards

If the product does not perform as described on this datasheet, we will offer a refund or replacement. For full details of the Abpromise, please visit **https://www.abcam.cn/abpromise** or contact our technical team.

Terms and conditions

- Guarantee only valid for products bought direct from Abcam or one of our authorized distributors