abcam

Product datasheet

Anti-SP1 (phospho T453) antibody ab59257

6 Abreviews 30 References 4 图像

概述

产品名称	Anti-SP1 (phospho T453)**抗体**
描述	**兔多克隆抗体**to SP1 (phospho T453)
宿主	Rabbit
经测试应用	**适用于:** ICC, ELISA, IHC-P, WB
种属反应性	**与反应:** Mouse, Human
免疫原	Synthetic peptide corresponding to Human SP1 aa 400-500 (phospho T453). Database link: **P08047**
阳性对照	IHC-P: Human brain tissue.
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. Avoid freeze / thaw cycle.
存储溶液	pH: 7.40 Preservative: 0.02% Sodium azide Constituents: 49% PBS, 50% Glycerol, 0.87% Sodium chloride Without Mg+2 and Ca+2
纯度	Immunogen affinity purified
纯化说明	ab59257 was affinity-purified from rabbit antiserum by affinity-chromatography using epitope-specific phosphopeptide. The antibody against non-phosphopeptide was removed by chromatography using non-phosphopeptide corresponding to the phosphorylation site.
克隆	**多克隆**

同种型 IgG

应用

The Abpromise guarantee Abpromise™承诺保证使用ab59257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
ICC	★★★★☆ (1)	Use at an assay dependent concentration.
ELISA		1/5000.
IHC-P		1/50 - 1/100.
WB	★★★★☆ (5)	1/500 - 1/1000. Detects a band of approximately 90 kDa (predicted molecular weight: 81 kDa).

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.

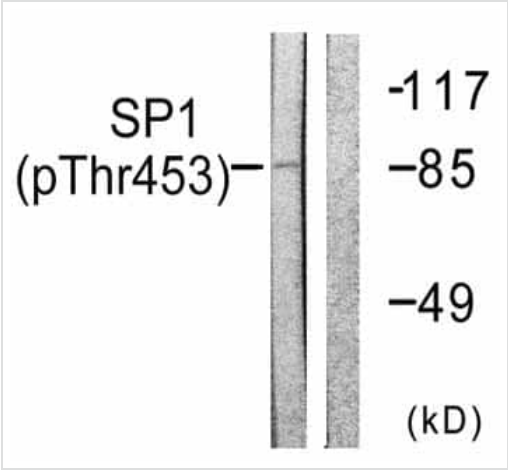
翻译后修饰 Phosphorylated on multiple serine and threonine residues. Phosphorylation is coupled to ubiquitination, sumoylation and proteolytic processing. Phosphorylation on Ser-59 enhances proteolytic cleavage. Phosphorylation on Ser-7 enhances ubiquitination and protein degradation. Hyperphosphorylation 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

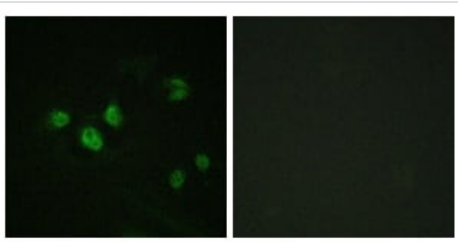


Western blot - Anti-SP1 (phospho T453) antibody (ab59257)

All lanes : Anti-SP1 (phospho T453) antibody (ab59257) at 1/500 dilution

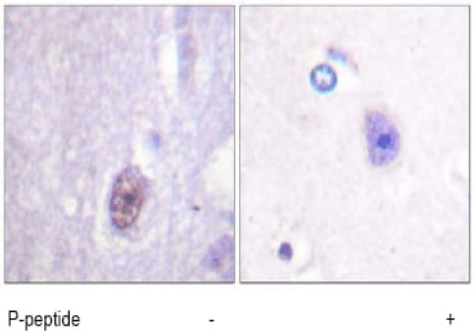
Lane 1 : A549 cell extracts
Lane 2 : A549 cell extracts with immunising phospho peptide

Predicted band size: 81 kDa
Observed band size: 90 kDa



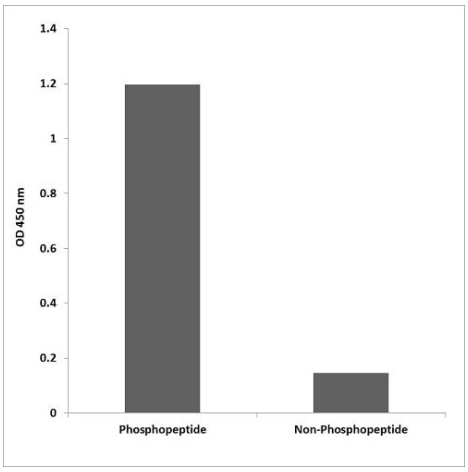
Immunocytochemistry - Anti-SP1 (phospho T453) antibody (ab59257)

Immunofluorescence analysis of HeLa cells, using ab59257 Antibody. The picture on the right is treated with the synthesized peptide.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-SP1 (phospho T453) antibody (ab59257)

ab59257, at 1/50 dilution, staining SP1 in paraffin embedded human brain tissue by Immunohistochemistry in the absence or presence of the immunising peptide.



ELISA - Anti-SP1 (phospho T453) antibody (ab59257)

ab59257 (1:1000) Antibody detects endogenous levels of SP1 only when phosphorylated at Thr453.

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