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SP1 Antibody

Purified Mouse Monoclonal Antibody (Mab)
Catalog # AW5076

Product Information

Application	IF, FC, WB
Primary Accession	P08047
Reactivity	Human
Host	Mouse
Clonality	Monoclonal
Calculated MW	80693
Isotype	IgG1,κ
Antigen Source	HUMAN

Additional Information

Gene ID	6667
Other Names	Transcription factor Sp1, SP1, TSFP1
Dilution	IF~~1:25 FC~~1:25 WB~~1:1000
Target/Specificity	This SP1 antibody is generated from a mouse immunized with a recombination protein from the human SP1.
Format	Purified monoclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein G column, followed by dialysis against PBS.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	SP1 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	SP1
Synonyms	TSFP1
Function	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). Also binds the PDGFR-alpha G-box promoter. May have a role in modulating the cellular response to DNA damage. Implicated in chromatin remodeling. 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. Isoform 3 is a stronger activator of transcription than isoform 1. Positively regulates the transcription of the core clock component BMAL1 (PubMed:10391891, PubMed:11371615, PubMed:11904305, PubMed:14593115, PubMed:16377629, PubMed:16478997, PubMed:16943418, PubMed:17049555, PubMed:18171990, PubMed:18199680, PubMed:18239466, PubMed:18513490, PubMed:18619531, PubMed:19193796, PubMed:20091743, PubMed:21046154, PubMed:21798247). Plays a role in the recruitment of SMARCA4/BRG1 on the c-FOS promoter. Plays a role in protecting cells against oxidative stress following brain injury by regulating the expression of RNF112 (By similarity).
Cellular Location	Nucleus. Cytoplasm. Note=Nuclear location is governed by glycosylated/phosphorylated states. Insulin promotes nuclear location, while glucagon favors cytoplasmic location
Tissue Location	Up-regulated in adenocarcinomas of the stomach (at protein level). Isoform 3 is ubiquitously expressed at low levels

Background

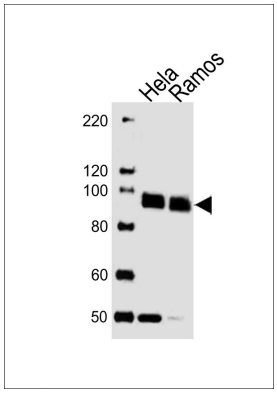
Transcription factor that can activate or repress transcription in response to physiological and pathological stimuli. Binds with high affinity to GC-rich motifs and regulates the expression of a large number of genes involved in a variety of processes such as cell growth, apoptosis, differentiation 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.

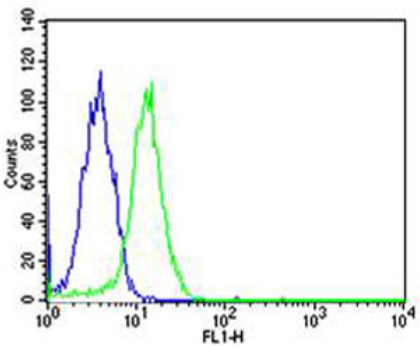
References

Haggart M.H.,et al.Submitted (APR-2000) to the EMBL/GenBank/DDBJ databases.
Takahara T.,et al.J. Biol. Chem. 275:38067-38072(2000).
Kadonaga J.T.,et al.Cell 51:1079-1090(1987).
Nicolas M.,et al.Submitted (APR-2000) to the EMBL/GenBank/DDBJ databases.
Handschug K.,et al.Submitted (FEB-2000) to the EMBL/GenBank/DDBJ databases.

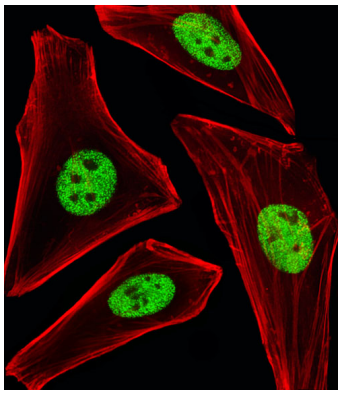
Images

Western blot analysis of lysates from Hela,Ramos cell line (from left to right), using SP1 Antibody(Cat. #AW5076). AW5076 was diluted at 1:1000 at each lane. A goat anti-mouse IgG H&L(HRP) at 1:10000 dilution was used as the secondary antibody.Lysates at 20ug per lane.





Flow cytometric analysis of Hela cells using SP1 Antibody(green, Cat#AW5076) compared to an isotype control of mouse IgG1(blue). AW5076 was diluted at 1:25 dilution. An Alexa Fluor® 488 goat anti-mouse lgG at 1:400 dilution was used as the secondary antibody.



Fluorescent image of Hela cells stained with SP1 Antibody(Cat#AW5076). AW5076 was diluted at 1:25 dilution. An Alexa Fluor 488-conjugated goat anti-mouse lgG at 1:400 dilution was used as the secondary antibody (green). Cytoplasmic actin was counterstained with Alexa Fluor® 555 conjugated with Phalloidin (red).