Sp1 phospho Ser101 antibody (pAb)

Catalog Nos: 39757, 39758
RRID: AB_2793332
Isotype: IgG
Application(s): WB
Reactivity: Human

Volumes: 100 µl, 10 µl
Purification: Affinity Purified
Host: Rabbit
Molecular Weight: 96 kDa

Background: Sp1 (specificity protein 1) is a human transcription factor involved in gene expression in the early development of an organism. The protein is 785 amino acids long, with a molecular weight of 81 kDa. The SP1 transcription factor contains a zinc finger protein motif, by which it binds directly to DNA and enhances gene transcription. Its zinc fingers are of the Cys2/His2 type and bind the consensus sequence 5′-(G/T)GGGCGG(G/A)(G/A)(C/T)-3′ (GC box element). It was discovered in 1983 and has since been modified to form Sp1C, which has a zinc finger protein DNA binding domain.

Sp1 contains two SQ/TQ domains, which are found in proteins phosphorylated by the DNA-damage response transducer/effector kinase ATM. Phosphorylation of serine 101 (dependent upon ATM and ATR) is stimulated by double strand DNA breakage (DSBs) as well as by blocks to DNA replication induced by treatment with hydroxyurea or UV irradiation. Sp1 phospho Ser101 co-localizes with ATM phospho Ser1981 at DSBs, suggesting that this phosphorylated version of Sp1 plays a role in double strand break repair.

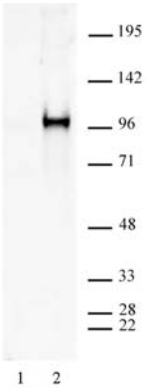
Immunogen: This Sp1 phospho Ser101 antibody was raised against a peptide containing phospho-serine 101 of human Sp1.

Buffer: Purified IgG in 70 mM Tris (pH 8), 105 mM NaCl, 31 mM glycine, 0.07 mM EDTA, 30% glycerol and 0.035% sodium azide. Sodium azide is highly toxic.

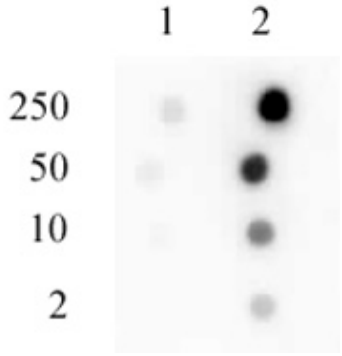
Application Notes:
Applications Validated by Active Motif:
WB: 1:500 dilution

Storage and Guarantee: Some products may be shipped at room temperature. This will not affect their stability or performance. Avoid repeated freeze/thaw cycles by aliquoting items into single-use fractions for storage at -20°C for up to 2 years. Keep all reagents on ice when not in storage. This product is guaranteed for 12 months from date of receipt.

This product is for research use only and is not for use in diagnostic procedures.



Sp1 phospho Ser101 antibody tested by Western blot.
Sp1 phospho Ser101 was detected in nuclear extracts of MCF-7 cells (25 µg per lane) using Sp1 phospho Ser101 antibody at dilution of 1:500. Lane 1: No treatment. Lane 2: Cells treated with H_2O_2.



Sp1 phospho Ser101 antibody tested by dot blot analysis.
Dot blot analysis was used to confirm the specificity of Sp1 phospho Ser101 antibody for Sp1 phosphorylated at serine 101. Modified and unmodified peptides were spotted onto PVDF and probed with Sp1 phospho Ser101 antibody at a dilution of 1:5,000. The amount of peptide spotted (in picomoles) is indicated next to each row. Lane 1: Unmodified Sp1 peptide. Lane 2: Sp1 peptide phosphorylated at Serine 101.