p53 (DO-1): sc-126

BACKGROUND

p53, a DNA-binding, oligomerization domain- and transcription activation domain-containing tumor suppressor, upregulates growth arrest and apoptosis-related genes in response to stress signals, thereby influencing programmed cell death, cell differentiation, and cell cycle control mechanisms. p53 localizes to the nucleus, yet can be chaperoned to the cytoplasm by the negative regulator, MDM2. MDM2 is an E3 ubiquitin ligase that is upregulated in the presence of active p53, where it poly-ubiquitinates p53 for proteasome targeting. p53 fluctuates between latent and active DNA-binding conformations and is differentially activated through posttranslational modifications, including phosphorylation and acetylation. Mutations in the DNA-binding domain (DBD) of p53, amino acids 110-286, can compromise energetically-favorable association with cis elements and are implicated in several human cancers.

REFERENCES


CHROMOSOMAL LOCATION


SOURCE

p53 (DO-1) is a mouse monoclonal antibody epitope mapping between amino acid residues 11-25 at the N-terminus of p53 of human origin.

PRODUCT

Each vial contains 200 µg IgG2a kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin. Also available as TransCruz reagent for Gel Supershift and ChIP applications.

In addition, p53 (DO-1) is available conjugated to biotin (sc-126 B), 200 µg/ml, for WB, IHCP and ELISA; and to either TRITC (sc-126 TRITC, 200 µg/ml), PerCP (sc-126 PerCP), PerCP-Cy5.5 (sc-126 PCPC5) or Alexa Fluor® 405 (sc-126 AF405), 100 tests in 2 ml, for IF, IHCP and FCM.

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STORAGE

Store at 4°C. **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

APPLICATIONS

p53 (DO-1) is recommended for detection of wild type and mutant p53 under denaturing and non-denaturing conditions of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and flow cytometry (1 µg per 1 x 10⁶ cells).

Suitable for use as control antibody for p53 siRNA (h): sc-29435, p53 shRNA Plasmid (h): sc-29435-SH and p53 shRNA (h) Lentiviral Particles: sc-29435-V.

p53 (DO-1) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of p53: 53 kDa.

Positive Controls: MCF7 whole cell lysate: sc-2206, A-431 whole cell lysate: sc-2201 or BT-20 cell lysate: sc-2223.

DATA

p53 (DO-1) HRP: sc-126 HRP. Direct western blot analysis of p53 expression in A-431 (A), HCT-116 (B), MCF7 (C) and BT-20 (D) whole cell lysates.


SELECT PRODUCT CITATIONS


RESEARCH USE

For research use only, not for use in diagnostic procedures.