

# Sp3 (D-6): sc-365038

## BACKGROUND

The Sp transcription factor family includes Sp1, Sp2, Sp3 (SPR-2) and Sp4 (SPR-1). Sp transcription factors share similar structures but do not share similar functions. All four proteins contain a highly conserved DNA-binding domain composed of three zinc fingers at the C-terminus. Sp family members bind the consensus sequence GGGGCGGGGC and other closely related sequences which are known as GC boxes. Sp1, Sp3 and Sp4 share a high affinity for GC boxes while Sp2 does not. Sp2 only weakly binds to GT boxes. Sp1, Sp2 and Sp3 are ubiquitously expressed, while Sp4 is abundantly expressed in brain with limited expression in other tissues. Sp1 and Sp3, but not Sp2 or Sp4, interact with E2, a regulatory element for the  $\beta$ 4 subunit of neuronal nicotinic acetylcholine receptors. Sp3 is the only Sp member to inhibit Sp1 and Sp4 mediated transcription. Multiple isoforms of Sp3 exist due to alternative splicing events.

## CHROMOSOMAL LOCATION

Genetic locus: SP3 (human) mapping to 2q31.1; Sp3 (mouse) mapping to 2 C3.

## SOURCE

Sp3 (D-6) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 627-651 at the C-terminus of Sp3 of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG<sub>2a</sub> 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, sc-365038 X, 200  $\mu$ g/0.1 ml.

Blocking peptide available for competition studies, sc-365038 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

## APPLICATIONS

Sp3 (D-6) is recommended for detection of Sp3 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Sp3 (D-6) is also recommended for detection of Sp3 in additional species, including canine, bovine, porcine and avian.

Suitable for use as control antibody for Sp3 siRNA (h): sc-29490, Sp3 siRNA (m): sc-36544, Sp3 shRNA Plasmid (h): sc-29490-SH, Sp3 shRNA Plasmid (m): sc-36544-SH, Sp3 shRNA (h) Lentiviral Particles: sc-29490-V and Sp3 shRNA (m) Lentiviral Particles: sc-36544-V.

Sp3 (D-6) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

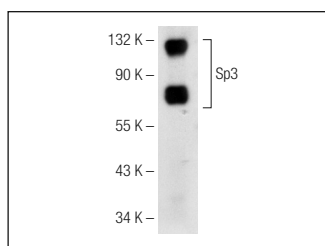
Molecular Weight of Sp3 isoforms: 78/100/115 kDa.

Positive Controls: K-562 whole cell lysate: sc-2203, Jurkat whole cell lysate: sc-2204 or A-431 whole cell lysate: sc-2201.

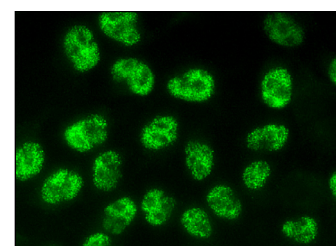
## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG $\kappa$  BP-HRP: sc-516102 or m-IgG $\kappa$  BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker<sup>™</sup> Molecular Weight Standards: sc-2035, UltraCruz<sup>®</sup> Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgG $\kappa$  BP-FITC: sc-516140 or m-IgG $\kappa$  BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz<sup>®</sup> Mounting Medium: sc-24941 or UltraCruz<sup>®</sup> Hard-set Mounting Medium: sc-359850.

## DATA



Sp3 (D-6): sc-365038. Western blot analysis of Sp3 expression in K-562 whole cell lysate.



Sp3 (D-6): sc-365038. Immunofluorescence staining of methanol-fixed HeLa cells showing nuclear localization.

## SELECT PRODUCT CITATIONS

1. Sharpe, M.A. and Baskin, D.S. 2016. Monoamine oxidase B levels are highly expressed in human gliomas and are correlated with the expression of HiF-1 $\alpha$  and with transcription factors Sp1 and Sp3. *Oncotarget* 7: 3379-3393.

## STORAGE

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

## RESEARCH USE

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

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.