SANTA CRUZ BIOTECHNOLOGY, INC.

Zyxin (2D1): sc-293448

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Zyxin is a low abundance phosphoprotein localized to focal adhesion plaques and is thought to perform regulatory functions at these regions. The protein contains a number of proline-rich sequences as well as three LIM domains, zinc finger domains involved in protein binding. Zyxin interacts with several other proteins at cell adhesion sites, including members of the CRP (cysteine-rich protein) LIM domain containing protein family. The proline-rich domain of Zyxin associates with an SH3 domain of p95 Vav, but not with similar SH3 domains containing proteins such as GRB2 or PLC γ. Zyxin has also been shown to interact with the focal adhesion protein VASP and may assist in the targeting of VASP to focal adhesions, microfilaments and membrane regions of high dynamic activity. Zyxin may contribute to the organization of the Actin cytoskeleton in mammalian cells.

REFERENCES

1. Sadler, I., et al. 1992. Zyxin and cCRP: two interactive LIM domain proteins associated with the cytoskeleton. J. Cell Biol. 119: 1573-1587.
2. Reinhard, M., et al. 1995. Identification, purification, and characterization of a Zyxin-related protein that binds the focal adhesion and microfilament protein VASP (vasodilator-stimulated phosphoprotein). Proc. Natl. Acad. Sci. USA 92: 7956-7960.
3. Macalma, T., et al. 1996. Molecular characterization of human Zyxin. J. Biol. Chem. 271: 31470-31478.

CHROMOSOMAL LOCATION

Genetic locus: ZYX (human) mapping to 7q34; Zyx (mouse) mapping to 6 B2.1.

SOURCE

Zyxin (2D1) is a mouse monoclonal antibody raised against amino acids 1-572 representing full length Zyxin of human origin.

PRODUCT

Each vial contains 100 µg IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

Zyxin (2D1) is recommended for detection of Zyxin of mouse, rat and 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 solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for Zyxin siRNA (h): sc-36370, Zyxin siRNA (m): sc-36373, Zyxin shRNA Plasmid (h): sc-36370-SH, Zyxin shRNA Plasmid (m): sc-36373-SH, Zyxin shRNA (h) Lentiviral Particles: sc-36370-V and Zyxin shRNA (m) Lentiviral Particles: sc-36373-V.

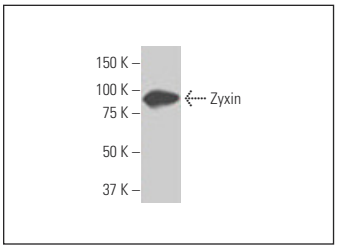
Molecular Weight of Zyxin: 82 kDa.

Positive Controls: NIH/3T3 whole cell lysate: sc-2210.

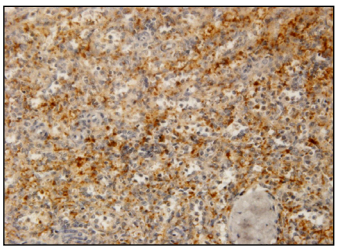
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® 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-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850. 4) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



Zyxin (2D1): sc-293448. Western blot analysis of Zyxin expression in NIH/3T3 whole cell lysate.



Zyxin (2D1); sc-293448. Immunoperoxidase staining of formalin fixed, paraffin-embedded human spleen tissue showing cytoplasmic and nuclear staining of cells in red pulp.

SELECT PRODUCT CITATIONS

1. Gerlach, B.D., et al. 2019. Phosphorylation of GMFγ by c-Abl coordinates lamellipodial and focal adhesion dynamics to regulate airway smooth muscle cell migration. Am. J. Respir. Cell Mol. Biol. 61: 219-231.
2. Delézay, O., et al. 2021. Functional, proteomic and phenotypic *in vitro* studies evidence podocyte injury after chronic exposure to heparin. Toxicol. Appl. Pharmacol. 429: 115683.
3. Yan, R., et al. 2021. Essential role of Zyxin in platelet biogenesis and glycoprotein Ib-IX surface expression. Cell Death Dis. 12: 955.
4. Partynska, A., et al. 2022. Expression of Zyxin in non-small cell lung cancer—a preliminary study. Biomolecules 12: 827.

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 for detailed protocols and support products.