SANTA CRUZ BIOTECHNOLOGY, INC.

Cypin (D-7): sc-393571

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

The assembly of neurotransmitter receptors and associated signal transduction machinery at synaptic sites involves postsynaptic density 95 (PSD-95) and related membrane-associated guanylate kinase (MAGUK) proteins. Cypin, (cytoplasmic PSD-95 interactor, also designated guanine deaminase and nedasin S), regulates intermediate steps in postsynaptic protein sorting, such as synaptic clustering of MAGUK proteins, and associates with multiple members of the PSD-95 family. Expressed both pre- and post-synaptically, Cypin is most prevalent within the cytoplasm of dendritic shafts and in the neck of synaptic spines. In non-neuronal cells, Cypin is most highly expressed in the basal membrane of intestinal epithelial cells. Cypin is also highly expressed in kidney, liver, lung, brain, and spleen, with lower levels of expression in placenta, heart, and skeletal muscle. Native Cypin may also be expressed as a dimer and a tetramer.

REFERENCES

1. Kim, E., et al. 1995. Clustering of Shaker-type K^+ channels by direct interaction with the PSD-95/SAP90 family for membrane-associated guanylate kinases. Nature 378: 85-88.
2. Kornau, H.C., et al. 1995. Domain interaction between NMDA receptor subunits and the postsynaptic density protein PDS-95. Science 269: 1737-1740.
3. Brenman, J.E., et al. 1996. Interaction of nitric oxide synthase with the postsynaptic density protein PSD-95 and α-1 syntrophin mediated by PDZ motifs. Cell 84: 757-767.

CHROMOSOMAL LOCATION

Genetic locus: GDA (human) mapping to 9q21.13; Gda (mouse) mapping to 19 B.

SOURCE

Cypin (D-7) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 399-424 near the C-terminus of Cypin of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Cypin (D-7) is available conjugated to agarose (sc-393571 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-393571 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-393571 PE), fluorescein (sc-393571 FITC), Alexa Fluor® 488 (sc-393571 AF488), Alexa Fluor® 546 (sc-393571 AF546), Alexa Fluor® 594 (sc-393571 AF594) or Alexa Fluor® 647 (sc-393571 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-393571 AF680) or Alexa Fluor® 790 (sc-393571 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-393571 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

Cypin (D-7) is recommended for detection of Cypin of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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 Cypin siRNA (h): sc-106853, Cypin siRNA (m): sc-142742, Cypin shRNA Plasmid (h): sc-106853-SH, Cypin shRNA Plasmid (m): sc-142742-SH, Cypin shRNA (h) Lentiviral Particles: sc-106853-V and Cypin shRNA (m) Lentiviral Particles: sc-142742-V.

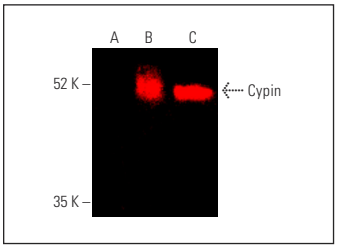
Molecular Weight of Cypin: 50 kDa.

Positive Controls: Cypin (h): 293T Lysate: sc-116517 or HCT-116 whole cell lysate: sc-364175.

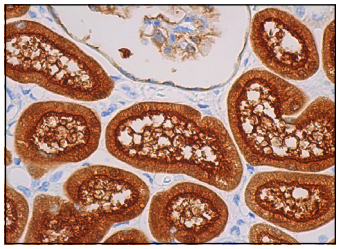
RECOMMENDED SUPPORT REAGENTS

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



Cypin (D-7): sc-393571. Near-Infrared western blot analysis of Cypin expression in non-transfected 293T: sc-117752 (**A**), human Cypin transfected 293T: sc-116517 (**B**) and HCT-116 (**C**) whole cell lysates. Blocked with UltraCruz® Blocking Reagent: sc-516214. Detection reagent used: m-IgG_{2a} BP-CFL 790: sc-542740.



Cypin (D-7): sc-393571. Immunoperoxidase staining of formalin fixed, paraffin-embedded human kidney tissue showing cytoplasmic, membrane and nuclear staining of cells in tubules.

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.