SANTA CRUZ BIOTECHNOLOGY, INC.

densin-180 (G-1): sc-390153

BACKGROUND

Densin-180 is a synaptic transmembrane protein that is tightly associated with the postsynaptic density in CNS neurons and is postulated to function as a synaptic adhesion molecule. Densin-180 is a brain-specific momber of the O-sialoglycoprotein family which is highly concentrated at synapses along dendrites. The sequence of densin-180 contains 17 leucine-rich repeats, a sialomucin domain, an apparent transmembrane domain, and a PDZ (PSD-95, DIg, Z0-1) domain. The PDZ domain contributes to its binding to α-actinin. The intracellular portion of densin-180, CaMKIIα, interacts with α-actinin at distinct binding sites and, together, they form a ternary complex stabilized by multiple interactions.

REFERENCES

1. Apperson, M.L., et al. 1996. Characterization of densin-180, a new brain-specific synaptic protein of the O-sialoglycoprotein family. J. Neurosci. 16: 6839-6852.
2. Kennedy, M.B. 1997. The postsynaptic density at glutamatergic synapses. Trends Neurosci. 20: 264-268.
3. Kennedy, M.B. 1998. Signal transduction molecules at the glutamatergic postsynaptic membrane. Brain Res. Brain Res. Rev. 26: 243-257.
4. Strack, S., et al. 2000. Association of calcium/calmodulin-dependent kinase II with developmentally regulated splice variants of the postsynaptic density protein densin-180. J. Biol. Chem. 275: 25061-25064.
5. Walikonis, R., et al. 2001. Densin-180 forms a ternary complex with the α-subunit of Ca^{2+}/calmodulin-dependent protein kinase II and α-actinin. J. Neurosci. 21: 423-433.

CHROMOSOMAL LOCATION

Genetic locus: LRRC7 (human) mapping to 1p31.1; Lrrc7 (mouse) mapping to 3 H4.

SOURCE

densin-180 (G-1) is a mouse monoclonal antibody raised against amino acids 596-895 mapping within an internal region of densin-180 of rat origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

densin-180 (G-1) is available conjugated to agarose (sc-390153 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-390153 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-390153 PE), fluorescein (sc-390153 FITC), Alexa Fluor® 488 (sc-390153 AF488), Alexa Fluor® 546 (sc-390153 AF546), Alexa Fluor® 594 (sc-390153 AF594) or Alexa Fluor® 647 (sc-390153 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-390153 AF680) or Alexa Fluor® 790 (sc-390153 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

RESEARCH USE

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

APPLICATIONS

densin-180 (G-1) is recommended for detection of densin-180 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for densin-180 siRNA (h): sc-41995, densin-180 siRNA (m): sc-41996, densin-180 shRNA Plasmid (h): sc-41995-SH, densin-180 shRNA Plasmid (m): sc-41996-SH, densin-180 shRNA (h) Lentiviral Particles: sc-41995-V and densin-180 shRNA (m) Lentiviral Particles: sc-41996-V.

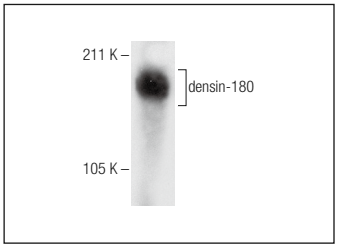
Molecular Weight of densin-180: 180 kDa.

Positive Controls: mouse brain extract: sc-2253 or rat brain extract: sc-2392.

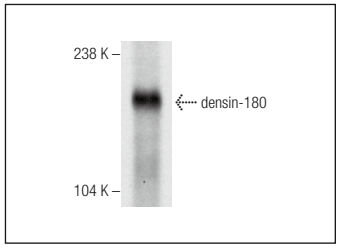
RECOMMENDED SUPPORT REAGENTS

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.

DATA



densin-180 (G-1): sc-390153. Western blot analysis of densin-180 expression in rat brain tissue extract.



densin-180 (G-1): sc-390153. Western blot analysis of densin-180 expression in mouse brain tissue extract.

SELECT PRODUCT CITATIONS

1. Choi, J., et al. 2019. Scribble, Erbin, and Lano redundantly regulate epithelial polarity and apical adhesion complex. J. Cell Biol. 218: 2277-2293.

STORAGE

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