SANTA CRUZ BIOTECHNOLOGY, INC.

C15orf58 (H-2): sc-514159

The Power to Question

BACKGROUND

C15orf58 is a 385 amino acid protein that is localized to the cytoplasm and belongs to the VTC2 family. C15orf58 functions as a highly efficient GDP-D-glucose phosphorylase and regulates the amount of GDP-D-glucose in cells. The gene encoding C15orf58 maps to human chromosome 15, which encodes more than 700 genes and is about 3% of the human genome. Angelman and Prader-Willi syndromes are associated with loss of function or deletion of genes in the 15q11-q13 region. In the case of Angelman syndrome, this loss is due to inactivity of the maternal 15q11-q13 encoded UBE3A gene in the brain by either chromosomal deletion or mutation. In cases of Prader-Willi syndrome, there is a partial or complete deletion of this region from the paternal copy of chromosome 15. Tay-Sachs disease is a lethal disorder associated with mutations of the HEXA gene, which is encoded by chromosome 15. Marfan syndrome is associated with chromosome 15 through the FBN1 gene.

REFERENCES

1. Hurowitz, G.I., et al. 1993. Neuropsychiatric aspects of adult-onset Tay-Sachs disease: two case reports with several new findings. J. Neuropsychiatry Clin. Neurosci. 5: 30-36.
2. Midla, G.S. 2008. Diagnosis and management of patients with Marfan syndrome. JAAPA 21: 21-25.
3. Dan, B. 2009. Angelman syndrome: current understanding and research prospects. Epilepsia 50: 2331-2339.
4. Ferrer-Bolufer, I., et al. 2009. Tyrosinemia type 1 and Angelman syndrome due to paternal uniparental isodisomy 15. J. Inherit. Metab. Dis. 32: S349-S353.

CHROMOSOMAL LOCATION

Genetic locus: GDPGP1 (human) mapping to 15q26.1; Gdpgp1 (mouse) mapping to 7 D3.

SOURCE

C15orf58 (H-2) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 269-291 within an internal region of C15orf58 of human origin.

PRODUCT

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

C15orf58 (H-2) is available conjugated to agarose (sc-514159 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-514159 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-514159 PE), fluorescein (sc-514159 FITC), Alexa Fluor® 488 (sc-514159 AF488), Alexa Fluor® 546 (sc-514159 AF546), Alexa Fluor® 594 (sc-514159 AF594) or Alexa Fluor® 647 (sc-514159 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-514159 AF680) or Alexa Fluor® 790 (sc-514159 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-514159 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

C15orf58 (H-2) is recommended for detection of C15orf58 of human origin, D330012F22Rik of mouse origin and the corresponding rat homolog 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 C15orf58 siRNA (h): sc-90100, D330012F22Rik siRNA (m): sc-142810, C15orf58 shRNA Plasmid (h): sc-90100-SH, D330012F22Rik shRNA Plasmid (m): sc-142810-SH, C15orf58 shRNA (h) Lentiviral Particles: sc-90100-V and D330012F22Rik shRNA (m) Lentiviral Particles: sc-142810-V.

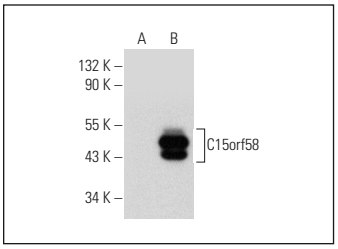
Molecular Weight of C15orf58: 42 kDa.

Positive Controls: C15orf58 (h2): 293T Lysate: sc-175833.

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



C15orf58 (H-2): sc-514159. Western blot analysis of C15orf58 expression in non-transfected: sc-117752 (**A**) and human C15orf58 transfected: sc-175833 (**B**) 293T whole cell lysates.

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.

Alexa Fluor® is a trademark of Molecular Probes, Inc., Oregon, USA