

C15orf58 (H-2): sc-514159

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

- 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.
- Midla, G.S. 2008. Diagnosis and management of patients with Marfan syndrome. *JAAPA* 21: 21-25.
- Dan, B. 2009. Angelman syndrome: current understanding and research prospects. *Epilepsia* 50: 2331-2339.
- 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.

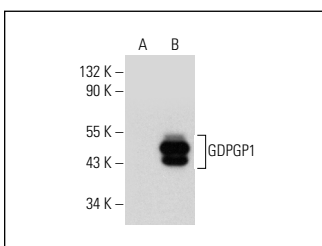
Molecular Weight of C15orf58: 42 kDa.

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



GDPGP1 (H-2): sc-514159. Western blot analysis of GDPGP1 expression in non-transfected: sc-117752 (A) and human GDPGP1 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.

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