

Islet-2 (A-1): sc-390746

BACKGROUND

Islet-2 (Insulin gene enhancer protein ISL-2) is a 359 amino acid protein encoded by the human gene ISL2. Islet-2 is a nuclear protein that contains two N-terminal LIM domains, followed by a homeodomain and a serine/glutamine/threonine-rich C-terminus. Islet-2 is a transcriptional factor that defines subclasses of motor neurons that segregate into columns in the spinal cord and select distinct axon pathways. Islet-1 and Islet-2 are initially expressed by all postmitotic spinal motor neurons prior to diversification of somatic and visceral neuronal fates. Somatic, but not visceral, motor neurons maintain Islet-2 expression at later embryonic stages. An early phase of Islet-2 expression by prospective visceral motor neurons of the sympathetic preganglionic motor column is critical for the emergence of complete visceral motor neuron character. Mutations that reduce or eliminate both Islet-1 and Islet-2 activity will result in pronounced defects in visceral motor neuron generation and eroded somatic motor neuron character.

REFERENCES

1. Segawa, H., et al. 2001. Functional repression of Islet-2 by disruption of complex with Ldb impairs peripheral axonal outgrowth in embryonic zebrafish. *Neuron* 30: 423-436.
2. Koulakov, A.A. and Tsiganov, D.N. 2004. A stochastic model for retinocollicular map development. *BMC Neurosci.* 5: 30-30.
3. Yeo, S.Y., et al. 2004. Involvement of Islet-2 in the Slit signaling for axonal branching and defasciculation of the sensory neurons in embryonic zebrafish. *Mech. Dev.* 121: 315-324.
4. Pak, W., et al. 2004. Magnitude of binocular vision controlled by Islet-2 repression of a genetic program that specifies laterality of retinal axon pathfinding. *Cell* 119: 567-578.
5. Ravier, M.A. and Rutter, G.A. 2005. Glucose or Insulin, but not zinc ions, inhibit glucagon secretion from mouse pancreatic α -cells. *Diabetes* 54: 1789-1797.

CHROMOSOMAL LOCATION

Genetic locus: ISL2 (human) mapping to 15q24.3; Isl2 (mouse) mapping to 9 B.

SOURCE

Islet-2 (A-1) is a mouse monoclonal antibody raised against amino acids 128-178 mapping within an internal region of Islet-2 of human origin.

PRODUCT

Each vial contains 200 μ g IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Islet-2 (A-1) is available conjugated to agarose (sc-390746 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-390746 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-390746 PE), fluorescein (sc-390746 FITC), Alexa Fluor[®] 488 (sc-390746 AF488), Alexa Fluor[®] 546 (sc-390746 AF546), Alexa Fluor[®] 594 (sc-390746 AF594) or Alexa Fluor[®] 647 (sc-390746 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-390746 AF680) or Alexa Fluor[®] 790 (sc-390746 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

Islet-2 (A-1) is recommended for detection of Islet-2 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g 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 Islet-2 siRNA (h): sc-62509, Islet-2 siRNA (m): sc-62510, Islet-2 shRNA Plasmid (h): sc-62509-SH, Islet-2 shRNA Plasmid (m): sc-62510-SH, Islet-2 shRNA (h) Lentiviral Particles: sc-62509-V and Islet-2 shRNA (m) Lentiviral Particles: sc-62510-V.

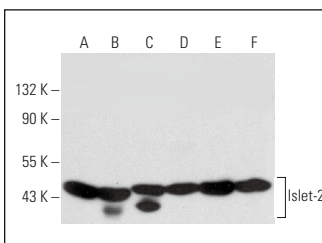
Molecular Weight of Islet-2: 40 kDa.

Positive Controls: Islet-2 (h): 293 Lysate: sc-113075, c4 whole cell lysate: sc-364186 or HeLa whole cell lysate: sc-2200.

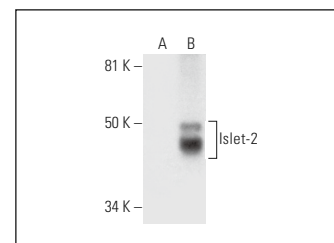
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ 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-IgG κ BP-FITC: sc-516140 or m-IgG κ 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



Islet-2 (A-1): sc-390746. Western blot analysis of Islet-2 expression in HeLa (A), Y79 (B), SP2/O (C), c4 (D), RPE-J (E) and RIN-m5F (F) whole cell lysates.



Islet-2 (A-1): sc-390746. Western blot analysis of Islet-2 expression in non-transfected: sc-110760 (A) and human Islet-2 transfected: sc-113075 (B) 293 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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