SANTA CRUZ BIOTECHNOLOGY, INC.

Islet-1 (B-1): sc-390793

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Islet-1 (ISL1 transcription factor, LIM/homeodomain) and Islet-2 (ISL2 transcription factor, LIM/homeodomain) contain amino-terminal LIM domains and a carboxy-terminal homeodomain and both influence developmental events. Islet-1 influences embryogenesis of the pancreatic islets of Langerhans and neural tube motor neuron differentiation. In developing mouse teeth, Islet-1 mediates patterning of dentition as an activator of Bmp4 expression in incisor (distal) areas of the stomatodeal epithelium. Islet-1 expression defines cardiac progenitor cell populations and is required for normal cardiac development and asymmetry. Islet-2 activity in newly generated motor neurons permits the diversification of visceral and somatic motor neuron subtypes in the developing spinal cord. Murine Islet-2 specifies retinal ganglion cell (RGC) laterality by repressing an ipsilateral pathfinding program unique to the ventral-temporal crescent (VTC) of RGCs in a Zic2- and EphB1-dependent manner.

CHROMOSOMAL LOCATION

Genetic locus: ISL1 (human) mapping to 5q11.1; Isl1 (mouse) mapping to 13 D2.3.

SOURCE

Islet-1 (B-1) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 244-282 of Islet-1 of human 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. Also available as TransCruz reagent for Gel Supershift and ChIP applications, sc-390793 X, 200 µg/0.1 ml.

Islet-1 (B-1) is available conjugated to agarose (sc-390793 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-390793 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-390793 PE), fluorescein (sc-390793 FITC), Alexa Fluor® 488 (sc-390793 AF488), Alexa Fluor® 546 (sc-390793 AF546), Alexa Fluor® 594 (sc-390793 AF594) or Alexa Fluor® 647 (sc-390793 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-390793 AF680) or Alexa Fluor® 790 (sc-390793 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-390793 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

STORAGE

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

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.

APPLICATIONS

Islet-1 (B-1) is recommended for detection of Islet-1 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).

Islet-1 (B-1) is also recommended for detection of Islet-1 in additional species, including equine, canine, bovine, porcine and avian.

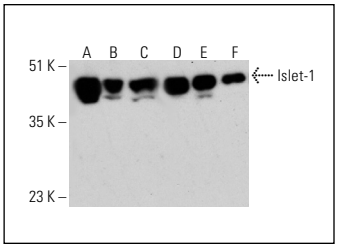
Suitable for use as control antibody for Islet-1 siRNA (h): sc-37121, Islet-1 siRNA (m): sc-37122, Islet-1 shRNA Plasmid (h): sc-37121-SH, Islet-1 shRNA Plasmid (m): sc-37122-SH, Islet-1 shRNA (h) Lentiviral Particles: sc-37121-V and Islet-1 shRNA (m) Lentiviral Particles: sc-37122-V.

Islet-1 (B-1) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

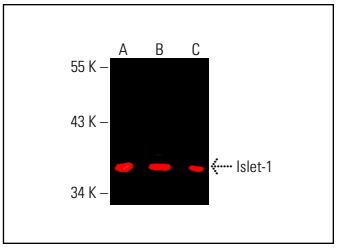
Molecular Weight of Islet-1: 39 kDa.

Positive Controls: K-562 whole cell lysate: sc-2203, RAW 264.7 whole cell lysate: sc-2211 or MIA PaCa-2 cell lysate: sc-2285.

DATA



Islet-1 (B-1) HRP: sc-390793 HRP. Direct western blot analysis of Islet-1 expression in HEL 92.1.7 nuclear extract (**A**) and K-562 (**B**), MIA PaCa-2 (**C**), RAW 264.7 (**D**), HeLa (**E**) and PC-12 (**F**) whole cell lysates.



Islet-1 (B-1) Alexa Fluor® 790: sc-390793 AF790. Direct near-infrared western blot analysis of Islet-1 expression in HEL 92.1.7 nuclear extract (**A**) and K-562 (**B**) and MIA PaCa-2 (**C**) whole cell lysates. Blocked with UltraCruz® Blocking Reagent: sc-516214.

SELECT PRODUCT CITATIONS

1. Li, F., et al. 2016. Enhancement of early cardiac differentiation of dedifferentiated fat cells by dimethyloxalylglycine via notch signaling pathway. Am. J. Transl. Res. 8: 4791-4801.
2. Dobosz, A.M., et al. 2022. Inhibition of stearoyl-CoA desaturase 1 in the mouse impairs pancreatic islet morphogenesis and promotes loss of β-cell identity and α-cell expansion in the mature pancreas. Mol. Metab. 67: 101659.
3. Wang, L., et al. 2023. ASCL1 characterizes adrenergic neuroblastoma via its pioneer function and cooperation with core regulatory circuit factors. Cell Rep. 42: 113541.

RESEARCH USE

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