

Islet-2 (S-12): sc-66457

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., Miyashita, T., Hirate, Y., Higashijima, S., Chino, N., Uyemura, K., Kikuchi, Y. and Okamoto, H. 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 Tsigankov, D.N. 2004. A stochastic model for retinocollicular map development. *BMC Neurosci.* 5: 30.
3. Yeo, S.Y., Miyashita, T., Fricke, C., Little, M.H., Yamada, T., Kuwada, J.Y., Huh, T.L., Chien, C.B. and Okamoto, H. 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., Hindges, R., Lim, Y.S., Pfaff, S.L. and O'Leary, D.D. 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.

CHROMOSOMAL LOCATION

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

SOURCE

Islet-2 (S-12) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of Islet-2 of human origin.

PRODUCT

Each vial contains 200 µg IgG 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-66457 X, 200 µg/0.1 ml.

Blocking peptide available for competition studies, sc-66457 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

RESEARCH USE

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

APPLICATIONS

Islet-2 (S-12) is recommended for detection of Islet-2 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, 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-2 (S-12) is also recommended for detection of Islet-2 in additional species, including bovine.

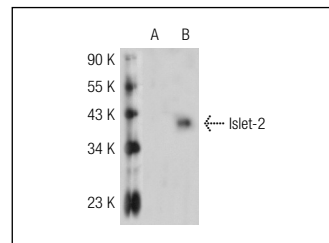
Suitable for use as control antibody for Islet-2 siRNA (h): sc-62509, Islet-2 siRNA (m): sc-62510, Islet-2 shRNA Plasmid (h): sc-62509-SH, Islet-2 shRNA Plasmid (m): sc-62510-SH, Islet-2 shRNA (h) Lentiviral Particles: sc-62509-V and Islet-2 shRNA (m) Lentiviral Particles: sc-62510-V.

Islet-2 (S-12) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of Islet-2: 40 kDa.

Positive Controls: Islet-2 (h): 293 Lysate: sc-113075.

DATA



Islet-2 (S-12): sc-66457. 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.

PROTOCOLS

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


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Satisfaction
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Try **Islet-2 (A-1): sc-390746** or **Islet-2 (203C5a): sc-130648**, our highly recommended monoclonal alternatives to Islet-2 (S-12).