

Islet-1 (K-20): sc-23590

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.

REFERENCES

1. Wang, M., et al. 1994. The LIM domain homeobox gene ISL1: conservation of human, hamster and rat complementary deoxyribonucleic acid sequences and expression in cell types of nonneuroendocrine lineage. *Endocrinology* 134: 1416-1422.
2. Tanizawa, Y., et al. 1994. Isolation of the human LIM/homeodomain gene Islet-1 and identification of a simple sequence repeat polymorphism. *Diabetes* 43: 935-941.
3. Pfaff, S., et al. 1996. Requirement for LIM homeobox gene ISL1 in motor neuron generation reveals a motor neuron-dependent step in interneuron differentiation. *Cell* 84: 309-320.
4. Mitsiadis, T.A., et al. 2003. Role of Islet-1 in the patterning of murine dentition. *Development* 130: 4451-4460.

CHROMOSOMAL LOCATION

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

SOURCE

Islet-1 (K-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of Islet-1 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-23590 X, 200 µg/0.1 ml.

Blocking peptide available for competition studies, sc-23590 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

APPLICATIONS

Islet-1 (K-20) is recommended for detection of Islet-1 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-1 (K-20) is also recommended for detection of Islet-1 in additional species, including equine, canine, bovine, porcine and avian.

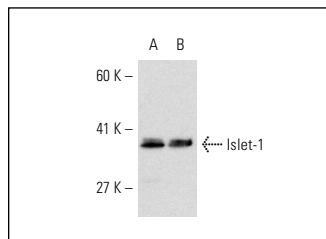
Suitable for use as control antibody for Islet-1 siRNA (h): sc-37121, Islet-1 siRNA (m): sc-37122, Islet-1 shRNA Plasmid (h): sc-37121-SH, Islet-1 shRNA Plasmid (m): sc-37122-SH, Islet-1 shRNA (h) Lentiviral Particles: sc-37121-V and Islet-1 shRNA (m) Lentiviral Particles: sc-37122-V.

Islet-1 (K-20) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of Islet-1: 39 kDa.

Positive Controls: HeLa nuclear extract: sc-2120, Jurkat nuclear extract: sc-2132 or K-562 whole cell lysate: sc-2203.

DATA



Islet-1 (K-20): sc-23590. Western blot analysis of Islet-1 expression in HeLa (A) and Jurkat (B) nuclear extracts.

SELECT PRODUCT CITATIONS

1. Naviaux, R.K., et al. 2009. Retained features of embryonic metabolism in the adult MRL mouse. *Mol. Genet. Metab.* 96: 133-144.
2. Lombardi, R., et al. 2009. Genetic fate mapping identifies second heart field progenitor cells as a source of adipocytes in arrhythmogenic right ventricular cardiomyopathy. *Circ. Res.* 104: 1076-1084.

RESEARCH USE

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


 MONOS
Satisfaction
Guaranteed

Try **Islet-1 (B-1): sc-390793** or **Islet-1 (3B8): sc-101072**, our highly recommended monoclonal alternatives to Islet-1 (K-20).