

Islet-1

Cat.No. 406 003; Polyclonal rabbit antibody, 50 µg specific antibody (lyophilized)

Data Sheet

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| Reconstitution/ Storage | 50 µg specific antibody, lyophilized. Affinity purified with the immunogen. For reconstitution add 50 µl H ₂ O to get a 1mg/ml solution in PBS. Then aliquot and store at -20°C until use. |
| Applications | WB: not tested yet IP: not tested yet ICC: not tested yet IHC: 1 : 100 IHC-P/FFPE: 1 : 200 up to 1 : 1000 |
| Immunogen | Synthetic peptide corresponding to AA 333 to 349 from mouse Islet1 (UniProt Id: P61372) |
| Reactivity | Reacts with: mouse (P61372), rat (P61374). Other species not tested yet. |
| Specificity | The antibody may crossreact with Islet-2 due to sequence homology. |

**TO BE USED IN VITRO / FOR RESEARCH ONLY
NOT TOXIC, NOT HAZARDOUS, NOT INFECTIOUS, NOT CONTAGIOUS**

Islet-1 (Isl1) is a member of the LIM/homeodomain family of transcription factors. It binds and regulates the promoters of the insulin, glucagon and somatostatin genes, and may play an important role in regulating insulin gene expression. It is central to the embryogenesis of pancreatic islets of Langerhans and is involved in the specification of motor neurons. It is expressed in subsets of neurons of the adrenal medulla and dorsal root ganglion, and in inner nuclear and ganglion cell layers in the retina.

Isl1 is essential for heart development, as its expression defines cardiac progenitor cell populations and is required for normal cardiac development and asymmetry.

Mutations in this gene have been associated with maturity-onset diabetes of the young.

Selected General References

- Distinction between two populations of islet-1-positive cells in hearts of different murine strains.
Khattar P, Friedrich FW, Bonne G, Carrier L, Eschenhagen T, Evans SM, Schwartz K, Fiszman MY, Vilquin JT
Stem cells and development (2011) 20(6): 1043-52.
- Human ISL1 heart progenitors generate diverse multipotent cardiovascular cell lineages.
Bu L, Jiang X, Martin-Puig S, Caron L, Zhu S, Shao Y, Roberts DJ, Huang PL, Domian IJ, Chien KR
Nature (2009) 460(7251): 113-7.
- Expression of the LIM-homeodomain protein Isl1 in the developing and mature mouse retina.
Elshatory Y, Deng M, Xie X, Gan L
The Journal of comparative neurology (2007) 503(1): 182-97.
- Islet-1 controls the differentiation of retinal bipolar and cholinergic amacrine cells.
Elshatory Y, Everhart D, Deng M, Xie X, Barlow RB, Gan L
The Journal of neuroscience : the official journal of the Society for Neuroscience (2007) 27(46): 12707-20.
- Multipotent embryonic isl1+ progenitor cells lead to cardiac, smooth muscle, and endothelial cell diversification.
Moretti A, Caron L, Nakano A, Lam JT, Bernshausen A, Chen Y, Qyang Y, Bu L, Sasaki M, Martin-Puig S, Sun Y, et al.
Cell (2006) 127(6): 1151-65.
- Characterization of the LIM/homeodomain gene islet-1 and single nucleotide screening in NIDDM.
Riggs AC, Tanizawa Y, Aoki M, Wasson J, Ferrer J, Rabin DU, Vaxillaire M, Froguel P, Permutt MA
Diabetes (1995) 44(6): 689-94.