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ISL1 Antibody
Purified Mouse Monoclonal Antibody
Catalog # AO1284a

Specification

ISL1 Antibody - Product Information

Application	**WB, IHC, ICC, E**
Primary Accession	P61371
Reactivity	**Human**
Host	**Mouse**
Clonality	**Monoclonal**
Isotype	**IgG1**
Calculated MW	**39kDa KDa**

Description
ISL1 (ISL1 transcription factor, LIM/homeodomain) is a member of the LIM/homeodomain family of transcription factors. It binds to the enhancer region of the insulin gene, among others, and may play an important role in regulating insulin gene expression. It is central to the development of pancreatic cell lineages and may also be required for motor neuron generation. Islet-1 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.

Immunogen
Purified recombinant fragment of human ISL1 expressed in E. Coli.

Formulation
Ascitic fluid containing 0.03% sodium azide.

ISL1 Antibody - Additional Information

Gene ID 3670

Other Names
Insulin gene enhancer protein ISL-1, Islet-1, ISL1

Dilution
WB~~1/500 - 1/2000
IHC~~1/200 - 1/1000
ICC~~N/A
E~~N/A

Storage
Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions
ISL1 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

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ISL1 Antibody - Protein Information

Name ISL1

Function
DNA-binding transcriptional activator. Recognizes and binds to the consensus octamer binding site 5'-ATAATTAA-3' in promoter of target genes. Plays a fundamental role in the gene regulatory network essential for retinal ganglion cell (RGC) differentiation. Cooperates with the transcription factor POU4F2 to achieve maximal levels of expression of RGC target genes and RGC fate specification in the developing retina. Involved in the specification of motor neurons in cooperation with LHX3 and LDB1 (By similarity). Binds to insulin gene enhancer sequences (By similarity). Essential for heart development. Marker of one progenitor cell population that give rise to the outflow tract, right ventricle, a subset of left ventricular cells, and a large number of atrial cells as well, its function is required for these progenitors to contribute to the heart. Controls the expression of FGF and BMP growth factors in this cell population and is required for proliferation and survival of cells within pharyngeal foregut endoderm and adjacent splanchnic mesoderm as well as for migration of cardiac progenitors into the heart (By similarity).

Cellular Location
Nucleus {ECO:0000250|UniProtKB:P61372}.

Tissue Location
Expressed in subsets of neurons of the adrenal medulla and dorsal root ganglion, inner nuclear and ganglion cell layers in the retina, the pineal and some regions of the brain

ISL1 Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

ISL1 Antibody - Images

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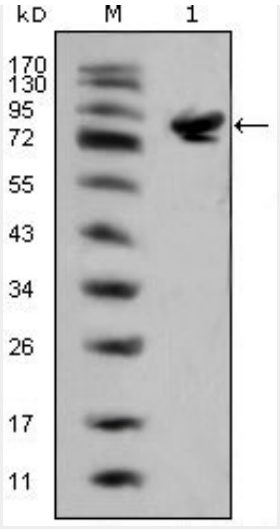

Figure 1: Western blot analysis using ISL1 mouse mAb against full-length ISL1 (aa1-349)-hIgGFc transfected HEK293 cell lysate(1).

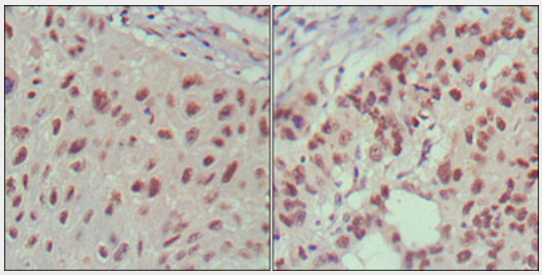

Figure 2: Immunohistochemical analysis of paraffin-embedded human lung cancer (left) and cervical carcinoma (right), showing nuclear localization using ISL1 mouse mAb with DAB staining.

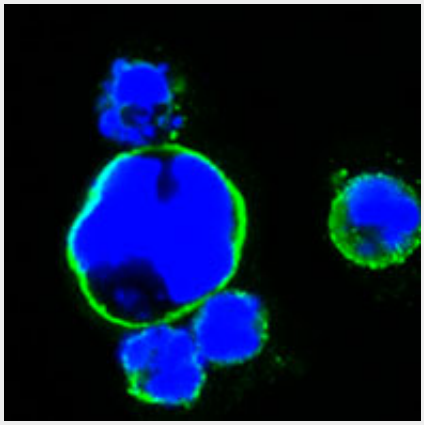

Figure 3: Confocal immunofluorescence analysis of HEK293 cells trasfected with full-length ISL1-hIgGFc using ISL1 mouse mAb (green). Blue: DRAQ5 fluorescent DNA dye.

ISL1 Antibody - References

1. Cell. 1996 Jan 26;84(2):309-20. 2. J Neurosci. 2008 Mar 26;28(13):3291-7.

ISL1 Antibody - Citations

- OTUB1 de-ubiquitinating enzyme promotes prostate cancer cell invasion in vitro and tumorigenesis in vivo.