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ISL1 Antibody

Purified Mouse Monoclonal Antibody
Catalog # AO1284a

Product Information

Application	WB, IHC, ICC, E
Primary Accession	P61371
Reactivity	Human
Host	Mouse
Clonality	Monoclonal
Clone Names	1H9
Isotype	IgG1
Calculated MW	39036
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.

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.

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

References

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

Images

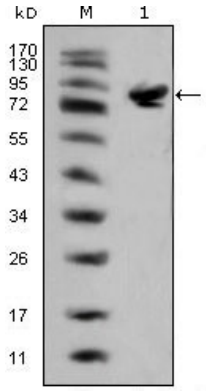


Figure 1: Western blot analysis using ISL1 mouse mAb against full-length ISL1 (aa1-349)-hIgGFc transfected HEK293 cell lysate(1).

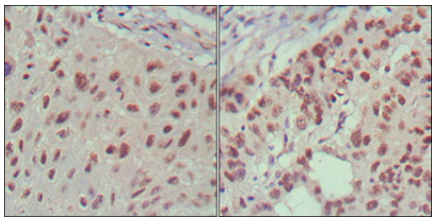
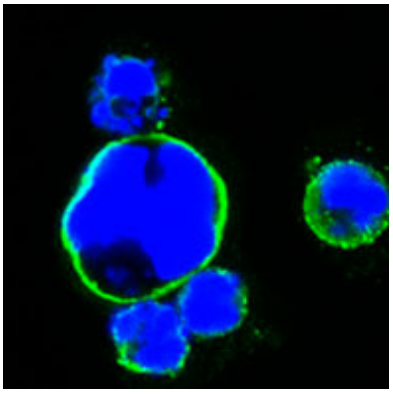


Figure 2: Immunohistochemical analysis of paraffin-embedded human lung cancer (left) and cervical carcinoma (right), showing nuclear localization using ISL1 mouse mAb with DAB staining.

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



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