

Datasheet for ABIN2689799  
**anti-ISL1 antibody**



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**7** Publications

## Overview

|              |                                                                                                                                                            |
|--------------|------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Quantity:    | 0.1 mg                                                                                                                                                     |
| Target:      | ISL1                                                                                                                                                       |
| Reactivity:  | Human, Mouse                                                                                                                                               |
| Host:        | Mouse                                                                                                                                                      |
| Clonality:   | Monoclonal                                                                                                                                                 |
| Conjugate:   | This ISL1 antibody is un-conjugated                                                                                                                        |
| Application: | Western Blotting (WB), Immunofluorescence (IF), Intracellular Staining (ICS),<br>Immunohistochemistry (Formalin-fixed Sections) (IHC (f)), BioImaging (BI) |

## Product Details

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|------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Brand:           | BD Pharmingen™                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Immunogen:       | Human Islet-1 Recombinant Protein                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Clone:           | Q11                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Isotype:         | IgG1 kappa                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Characteristics: | Islet-1 is a LIM-homeodomain transcription factor important for motor neuron differentiation and the formation of islet cells in the pancreas. Various heart cell types, such as cardiac muscle, the conduction system and endothelial cells in multiple heart tissue compartments during cardiogenesis, have been found to originate from Islet-1-positive cardiac precursor cells. Moreover, Islet-1-positive cells from differentiated human embryonic stem cell lines were found to be capable of self-renewal and expansion and could differentiate into the three major cell types of the heart. Western blot analyses of lysates from transfected cells demonstrate that the |

## Product Details

Q11-465 monoclonal antibody reacts with human Islet-1 (ISL-1, ISL1) and Islet-2 (ISL-2, ISL2), similar to the 4D5 clone (Tsuchida et al, 1994). Cross-reactivity with mouse Islet is also observed. TOP LEFT: Western Blot analysis of Islet-1 in mouse pancreatic tumor (insulinoma). Lysate from Beta-TC-6 cells (ATCC CRL-11506™) was probed with Purified Mouse anti-Islet-1 monoclonal antibody at titrations of 0.5 (lane 1), 0.25 (lane 2), and 0.125 µg/mL (lane 3). Islet-1 is identified as a band of ~45-50 kDa. TOP RIGHT: Immunohistochemical staining of human Islet-1. Following antigen retrieval with BD Retrieval A buffer (Cat. No. 550524), formalin-fixed paraffin-embedded human pancreas sections were stained with either purified mouse IgG1, κ Isotype control (Cat. No.550878, top panel) or Purified Mouse Anti-Human Islet-1 (Cat. No.562546, bottom panel). A three-step staining procedure that employs Biotin Goat Anti-Mouse Ig secondary antibody (Cat. No. 550337), Streptavidin HRP (Cat. No. 550946), and DAB substrate kit (Cat. No. 550880) was used. As shown in the figure, the Islet-1 staining is mainly nuclear in the pancreas islet. Original magnification: 40X. BOTTOM ROW: Immunofluorescent staining of Islet-1 in spontaneously differentiated human embryonic stem (ES) cells (left panel) and mouse pancreatic tumor (insulinoma) cells (right panel). Spontaneously differentiated (Emre et al., 2010) H9 human ES cells (WiCell, Madison, WI) and Beta-T-C6 cells (ATCC, CRL-11506™) were fixed with BD Cytofix™ Fixation Buffer (Cat. No. 554655), permeabilized with BD Phosflow™ Perm Buffer III (Cat. No.558050), and stained with Purified Mouse anti-Islet-1 monoclonal antibody (pseudo-colored green) at 1.25 µg/mL. The second-step reagent was Alexa Fluor® 488 goat anti-mouse Ig (Life Technologies). Nuclear staining (pseudo-colored blue) was either with DAPI (left panel) or Hoechst 33342 (Cat. No. 561908, right panel). The images were captured on a BD Pathway™ 435 Cell Analyzer and merged using BD AttoVision™ Software.

BD Pharmingen™ Purified Mouse anti-Islet-1 - Purified - Clone Q11-465 - Isotype Mouse IgG1, κ - Reactivity Ms, Hu - 0.1 mg

|               |                                                                                                             |
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| Purification: | The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography. |
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## Target Details

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|-------------------|---------------------------------------------|
| Target:           | ISL1                                        |
| Alternative Name: | Islet-1 ( <a href="#">ISL1 Products</a> )   |
| Background:       | Synonyms: ISL-1, ISL1, Islet-2, ISL-2, ISL2 |
| Molecular Weight: | 45-50 kDa                                   |

## Target Details

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| Pathways: | <a href="#">Positive Regulation of Peptide Hormone Secretion</a> , <a href="#">Intracellular Steroid Hormone Receptor Signaling Pathway</a> , <a href="#">Peptide Hormone Metabolism</a> , <a href="#">Regulation of Intracellular Steroid Hormone Receptor Signaling</a> , <a href="#">Nuclear Hormone Receptor Binding</a> , <a href="#">Chromatin Binding</a> |
|-----------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

## Application Details

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| Application Notes: | Optimal working dilution should be determined by the investigator. |
| Restrictions:      | For Research Use only                                              |

## Handling

|                    |                                                                                                                        |
|--------------------|------------------------------------------------------------------------------------------------------------------------|
| Concentration:     | 0.5 mg/mL                                                                                                              |
| Buffer:            | Aqueous buffered solution containing $\leq 0.09$ % sodium azide.                                                       |
| Preservative:      | Sodium azide                                                                                                           |
| Precaution of Use: | This product contains Sodium azide: a POISONOUS AND HAZARDOUS SUBSTANCE which should be handled by trained staff only. |
| Storage:           | 4 °C                                                                                                                   |
| Storage Comment:   | Store undiluted at 4°C.                                                                                                |

## Publications

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|-------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Product cited in: | <p>Emre, Vidal, Elia, OConnor, Paramban, Hefferan, Navarro, Goldberg, Varki, Marsala, Carson: "The ROCK inhibitor Y-27632 improves recovery of human embryonic stem cells after fluorescence-activated cell sorting with multiple cell surface markers." in: <b>PLoS ONE</b>, Vol. 5, Issue 8, pp. e12148, (2010) (<a href="#">PubMed</a>).</p> <p>Xu, Police, Hassanipour, Li, Chen, Priest, OSullivan, Laflamme, Zhu, Van Biber, Hegerova, Yang, Delavan-Boorsma, Davies, Lebkowski, Gold: "Efficient generation and cryopreservation of cardiomyocytes derived from human embryonic stem cells." in: <b>Regenerative medicine</b>, Vol. 6, Issue 1, pp. 53-66, (2010) (<a href="#">PubMed</a>).</p> <p>Bu, Jiang, Martin-Puig, Caron, Zhu, Shao, Roberts, Huang, Domian, Chien: "Human ISL1 heart progenitors generate diverse multipotent cardiovascular cell lineages." in: <b>Nature</b>, Vol. 460, Issue 7251, pp. 113-7, (2009) (<a href="#">PubMed</a>).</p> |
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## Publications

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Ebert, Yu, Rose, Mattis, Lorson, Thomson, Svendsen: "Induced pluripotent stem cells from a spinal muscular atrophy patient." in: **Nature**, Vol. 457, Issue 7227, pp. 277-80, (2009) ([PubMed](#)).

Laugwitz, Moretti, Caron, Nakano, Chien: "Islet1 cardiovascular progenitors: a single source for heart lineages?" in: **Development (Cambridge, England)**, Vol. 135, Issue 2, pp. 193-205, (2007) ([PubMed](#)).

There are more publications referencing this product on: [Product page](#)