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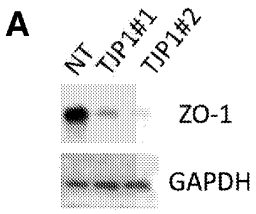
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(54) Title: MODULATION OF TJP1 EXPRESSION TO REGULATE REGENERATION OF HEART CELLS



B

mTJP1 shRNA#1 --- SEQ ID NO: 3
CCGGCGTGGATTGAACTTACTAAATCTCGAGATTTAGTAAGTTCAATCCACGTTTTTG

mTJP1 shRNA#2 --- SEQ ID NO: 4
CCGGCCGCGAAGTTATGAGCAAGTTCTCGAGAACTTGCTCATAACTTCGCGGTTTTTG

Figure 8

(57) Abstract: The invention is a method for treating a heart disease, in particular acute myocardial infarction (AMI) in a subject comprising the step of administering to the subject a Tjp1 inhibitor, wherein administration of said Tjp1 inhibitor promotes cardiomyocyte proliferation. The invention further includes use of Tjp1 inhibitor in the manufacture of a medicament for a heart disease, a patch, and a nucleic acid encoding a Tjp1 inhibitor. In a particular embodiment, the Tjp1 inhibitor is a nucleic acid, i.e. an siRNA or shRNA of Tjp1. The invention also includes administration of said Tjp1 inhibitor in combination with Neuregulin-1 (NRG1), Fibroblast growth factor (FGF), Vascular endothelial growth factor (VEGF) or Follistatin-like 1 (Fst1) and wherein said inhibitor is delivered in an adeno-associated virus of serotype 9 (AAV 9).

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