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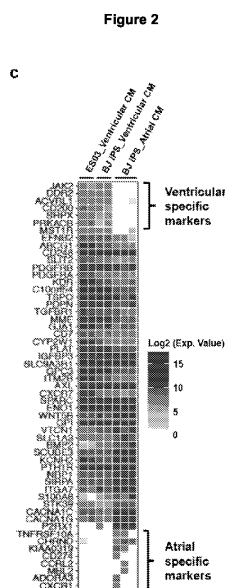
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(54) Title: METHOD FOR ISOLATING A CARDIOMYOCYTE POPULATION

(57) Abstract: The present application relates to, *inter alia*, the identification, isolation and/or purification of cardiomyocytes in a sample. The method for isolating a cardiomyocyte population from a heterogeneous population of differentiated cells comprises: (a) contacting the sample with at least one agent that specifically binds to at least one cardiomyocyte surface marker selected from JAK2, DDR2, ACVRL1, CD200, SRPX, PRKACB, MST1R, P2RX1, TNFRSF10A, CHRND, KIAA0319, CD274, CCRL2, MBL2, ADORA3 and CD181; and (b) isolating the cells bound to the said agent. A preferred embodiment comprises contacting the sample with a first agent that specifically binds to a cell surface marker selected from JAK2, DDR2, ACVRL1, CD200, SRPX, PRKACB and MST1R to provide ventricular cardiomyocytes and a second agent that specifically binds to a cell surface marker selected from P2RX1, TNFRSF10A, CHRND, KIAA0319, CD274, CCRL2, MBL2, ADORA3 and CD181 to provide atrial cardiomyocytes. Another embodiment relates to the use of the isolated cardiomyocyte population for treating cardiovascular disease or disorder.



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