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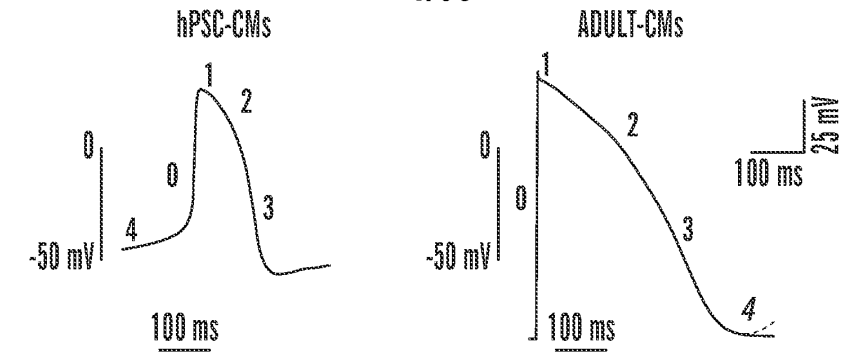


FIG. 1A

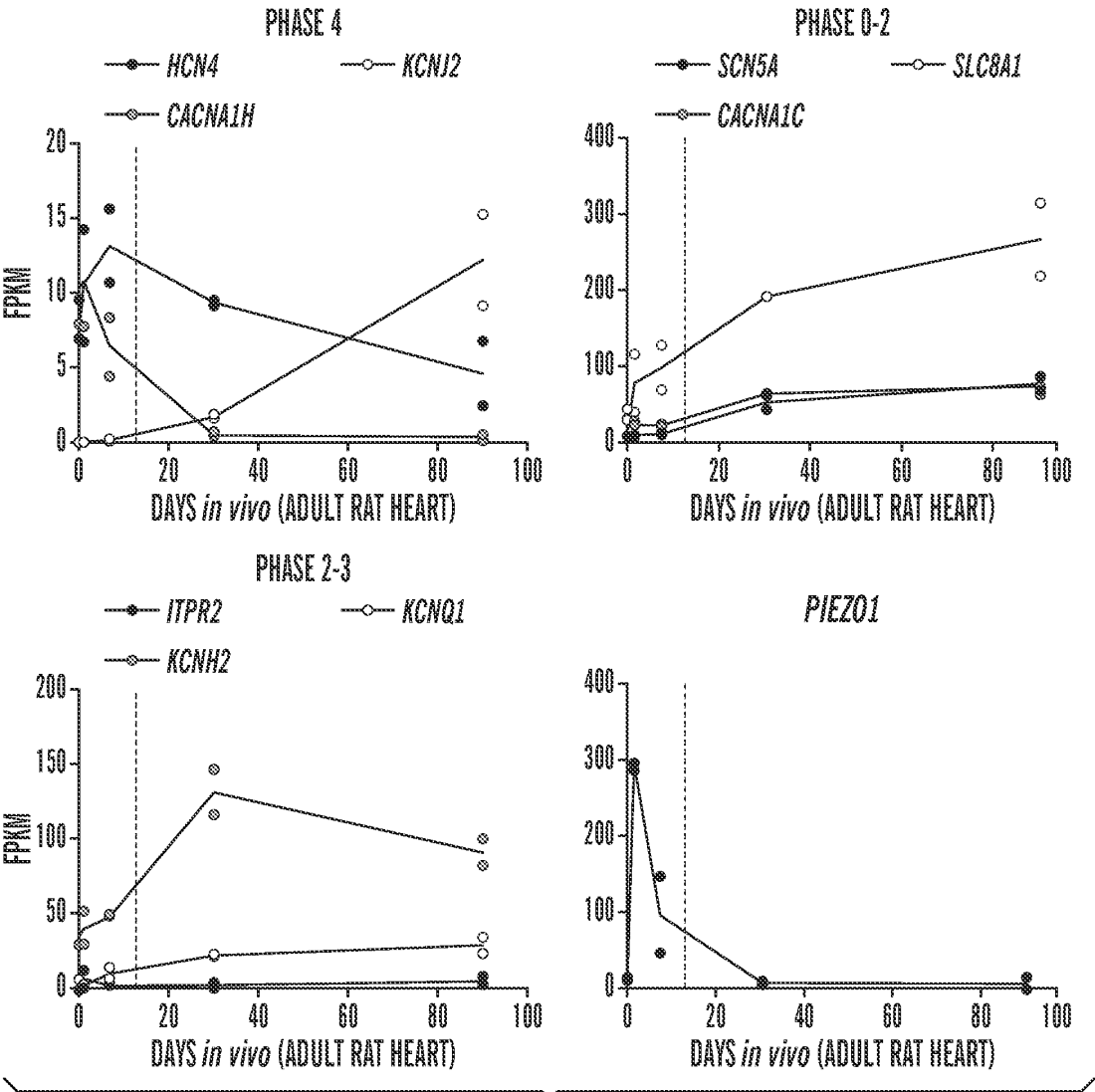


FIG. 1B

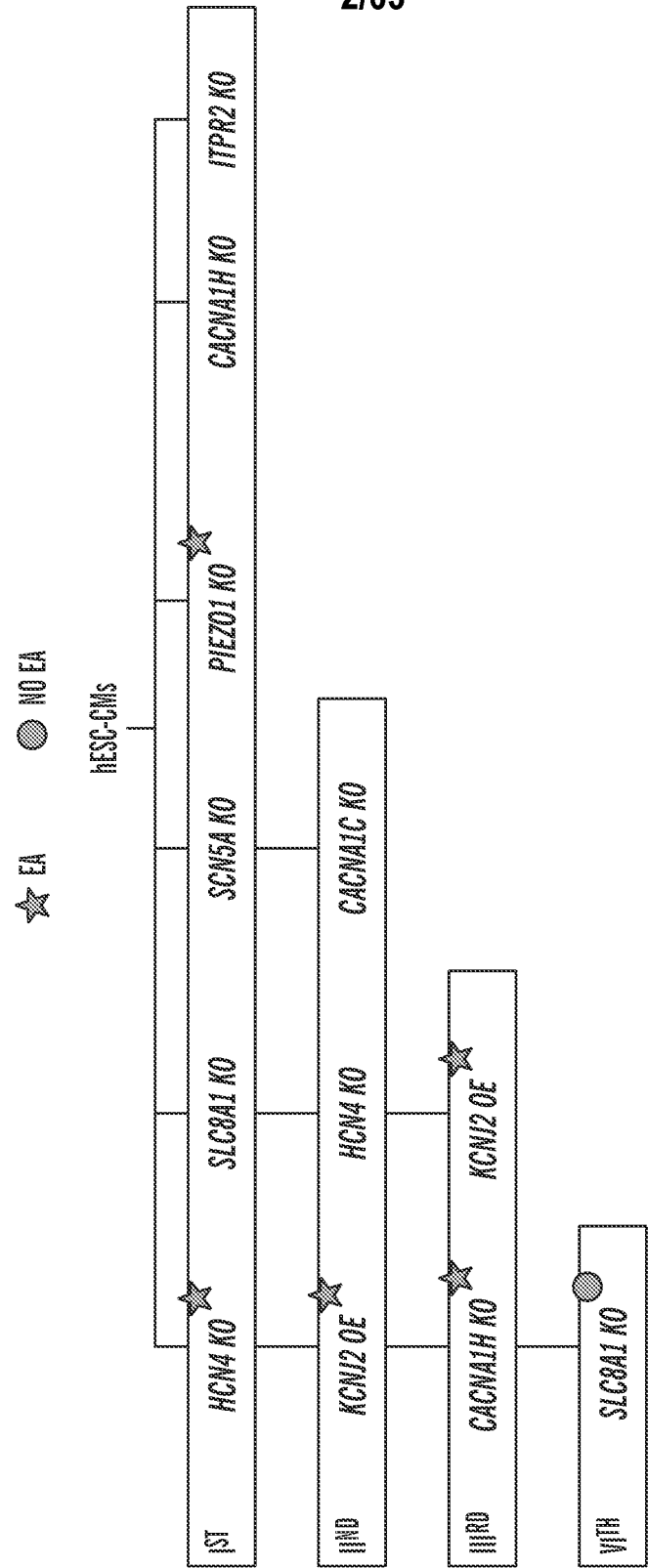


FIG. 1C

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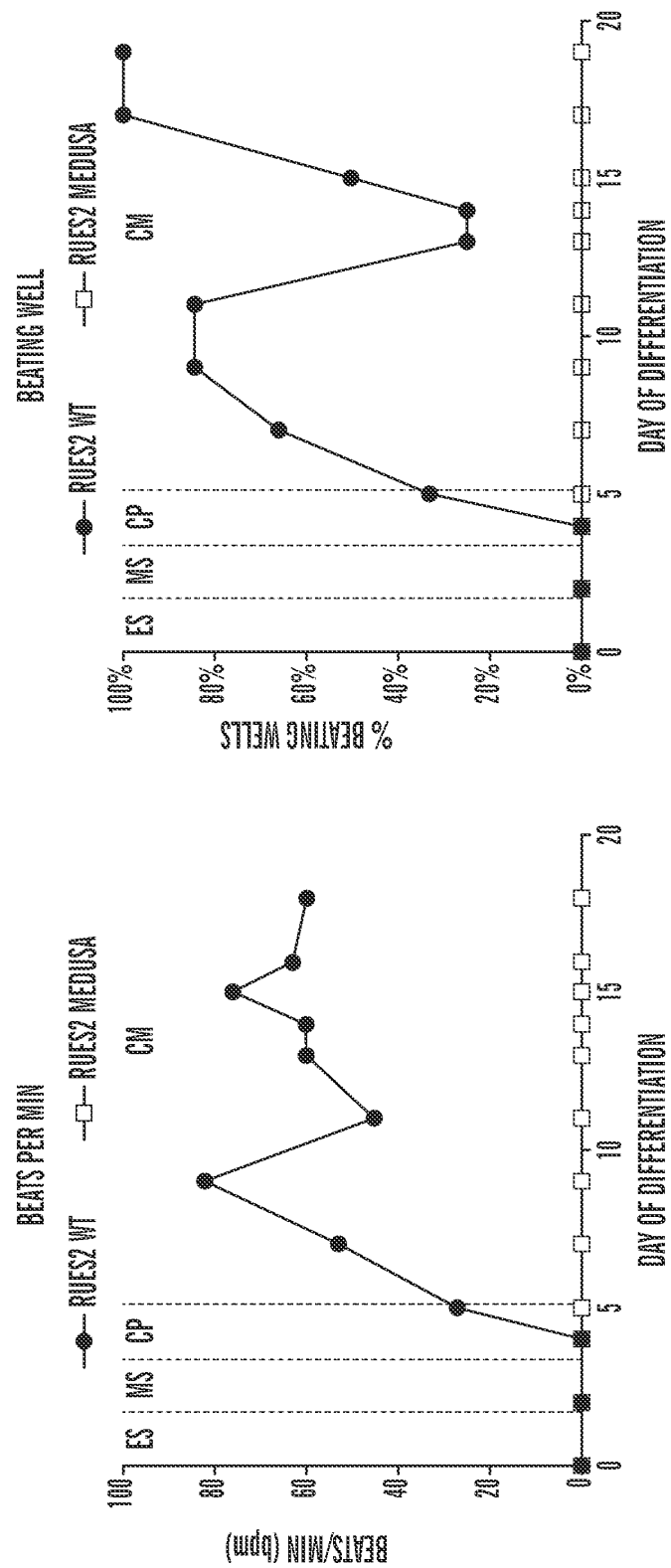
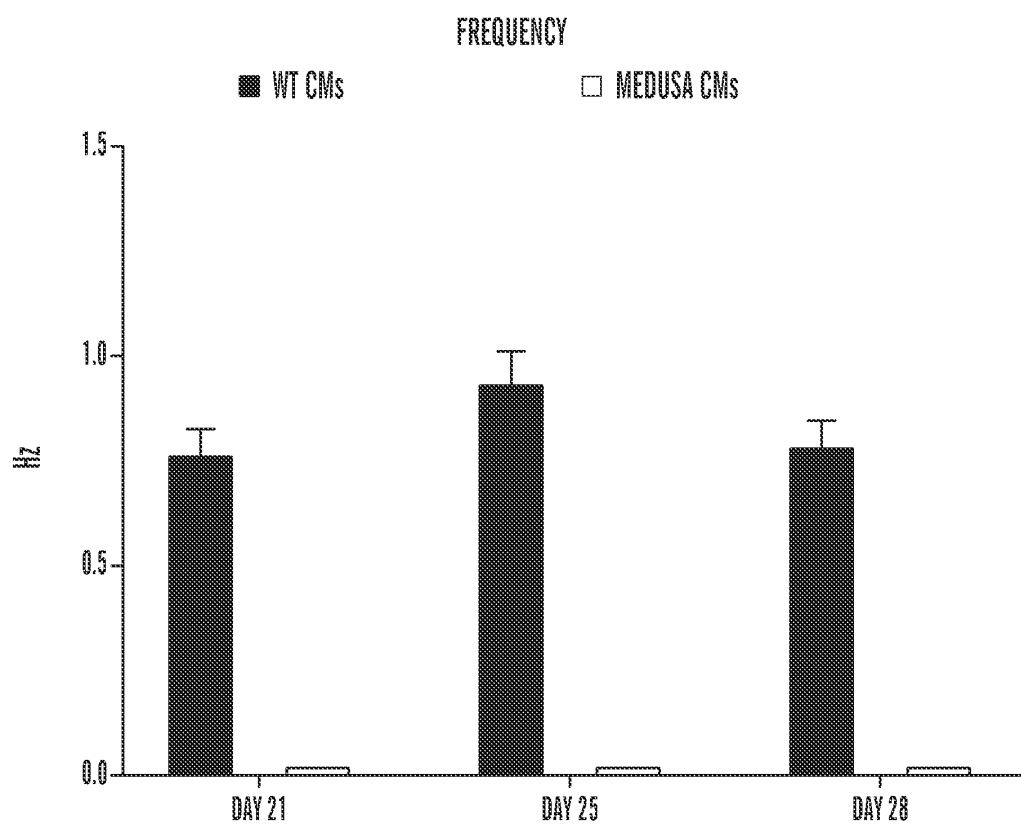


FIG. 2A

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**FIG. 2B**

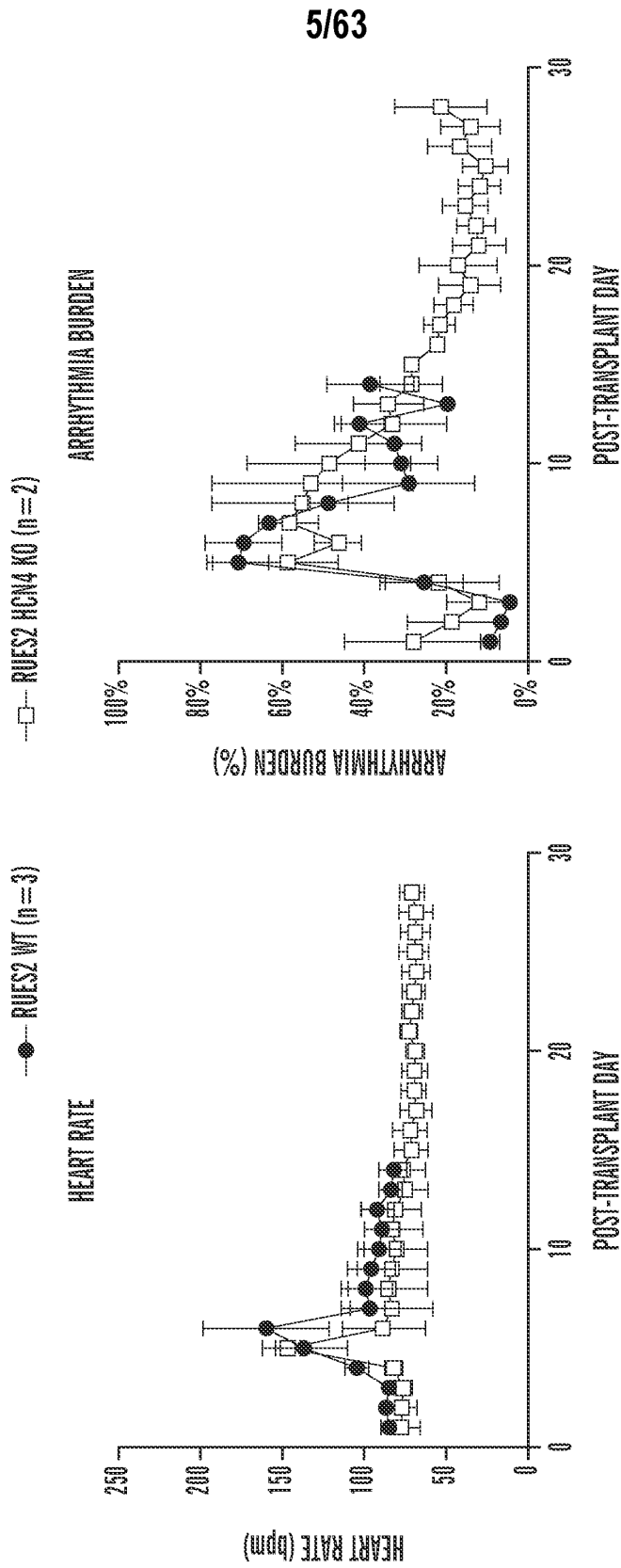


FIG. 3A

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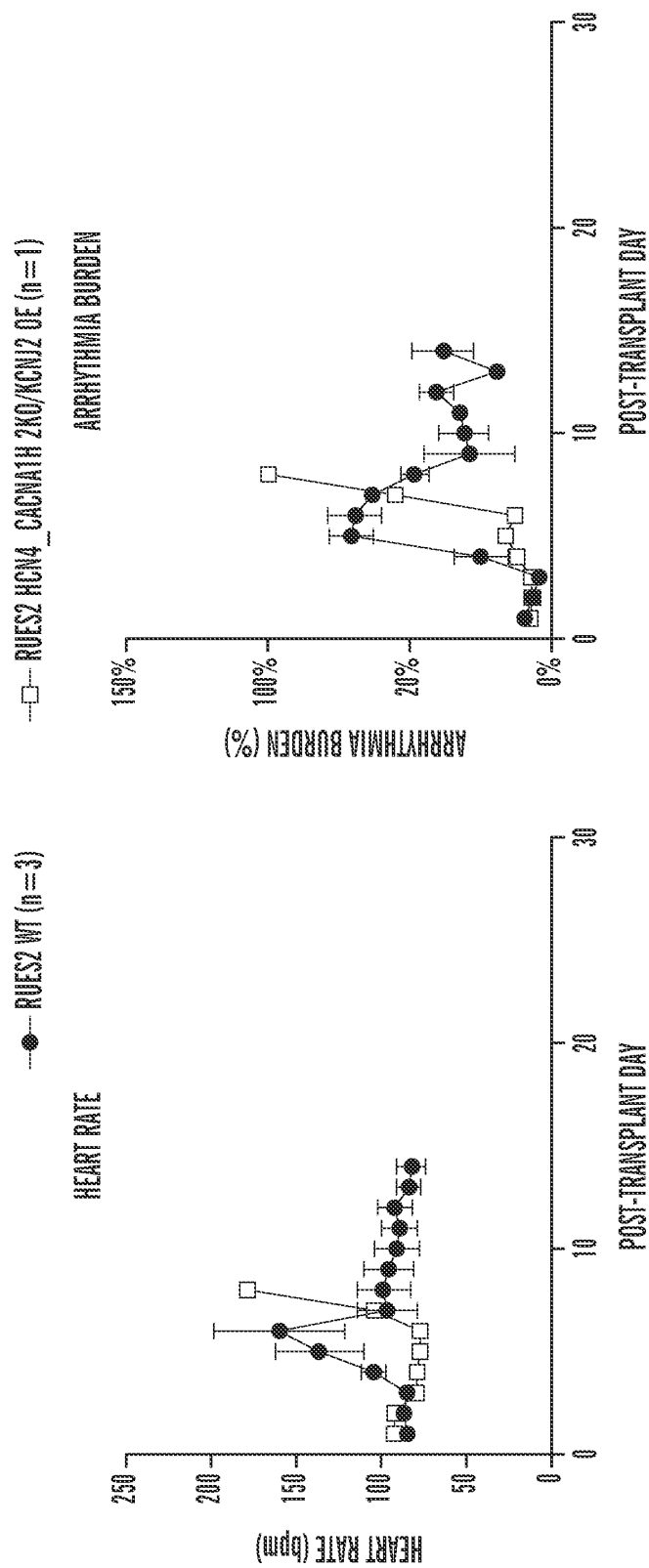


FIG. 3A (cont.)

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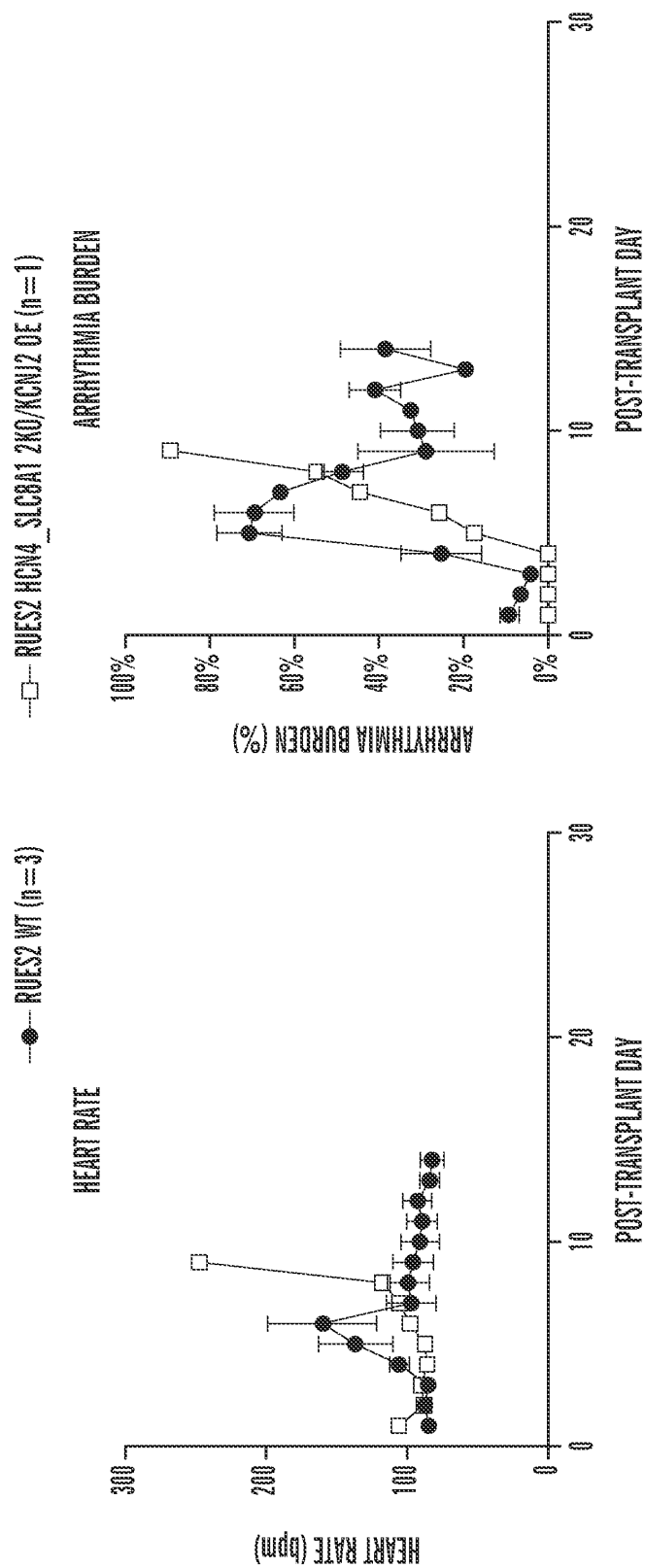


FIG. 3A (cont.)

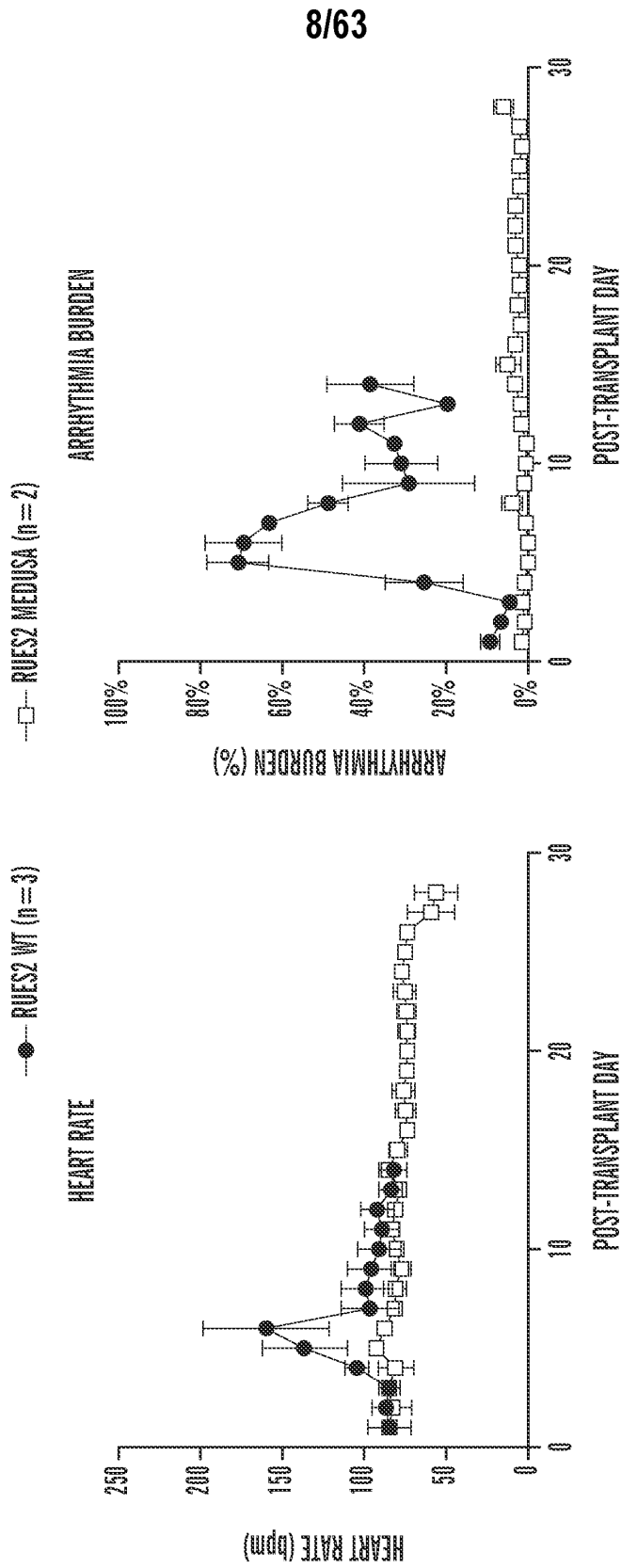


FIG. 3B

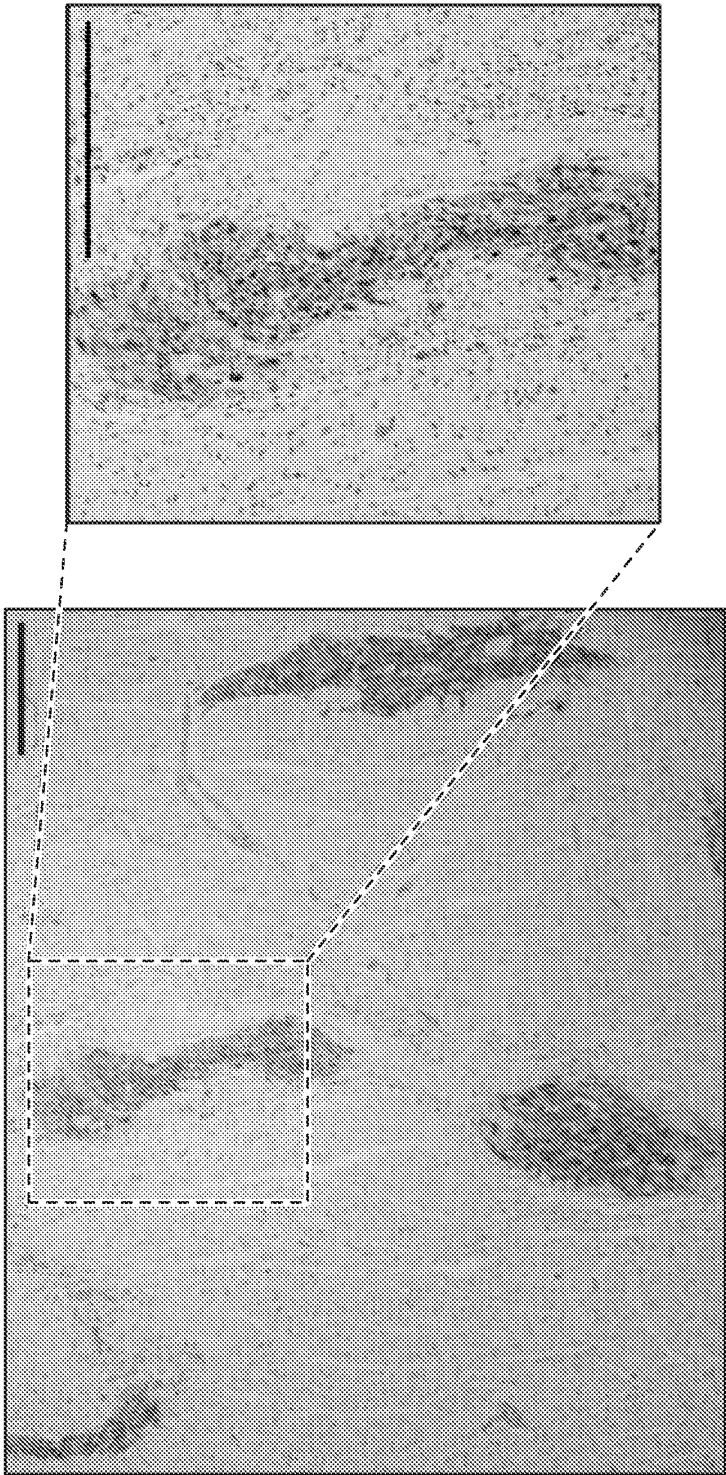


FIG. 3C

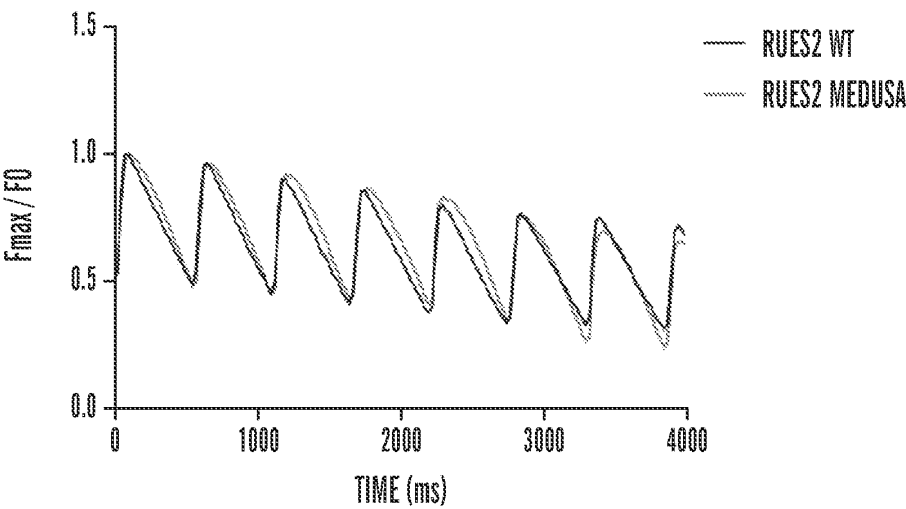


FIG. 4A

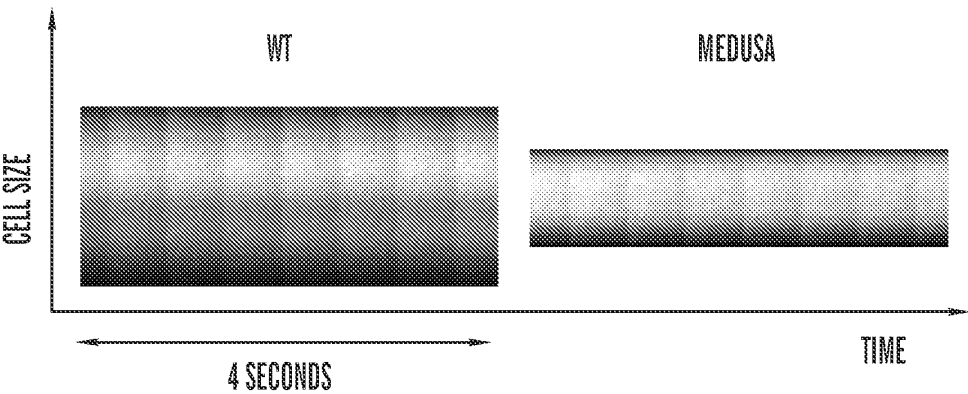


FIG. 4B

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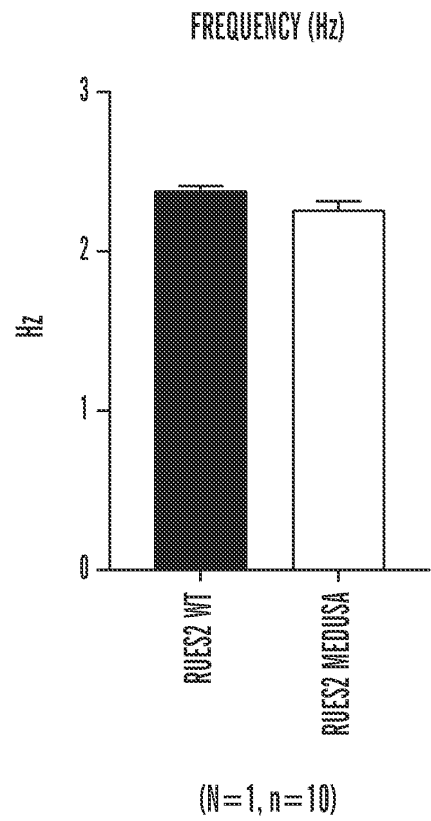
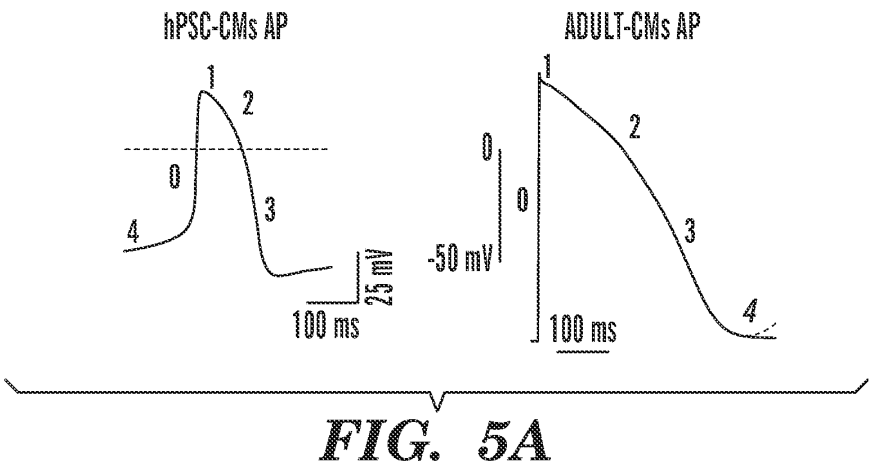
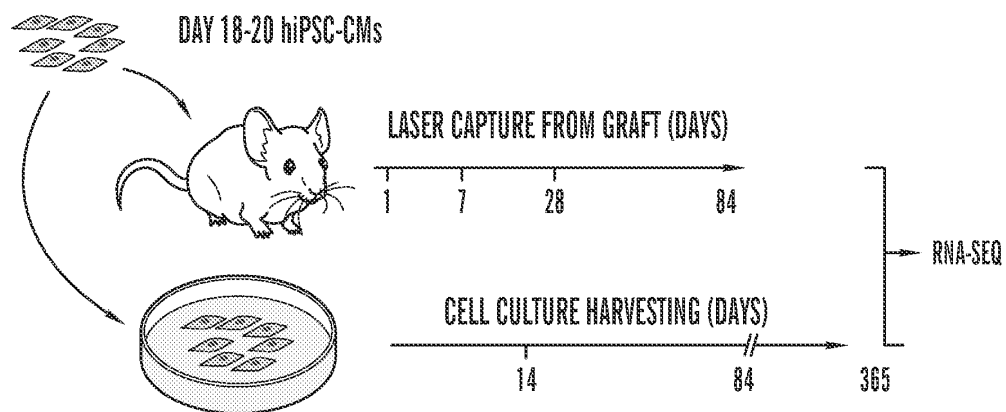
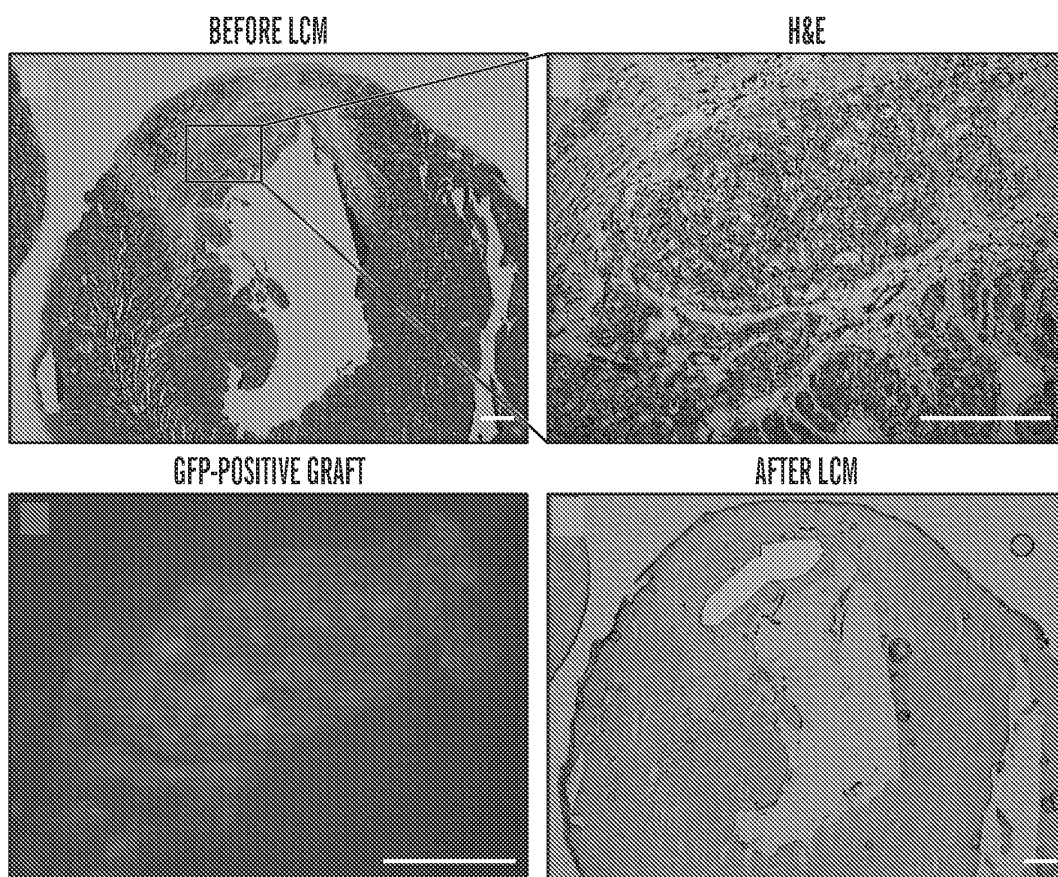


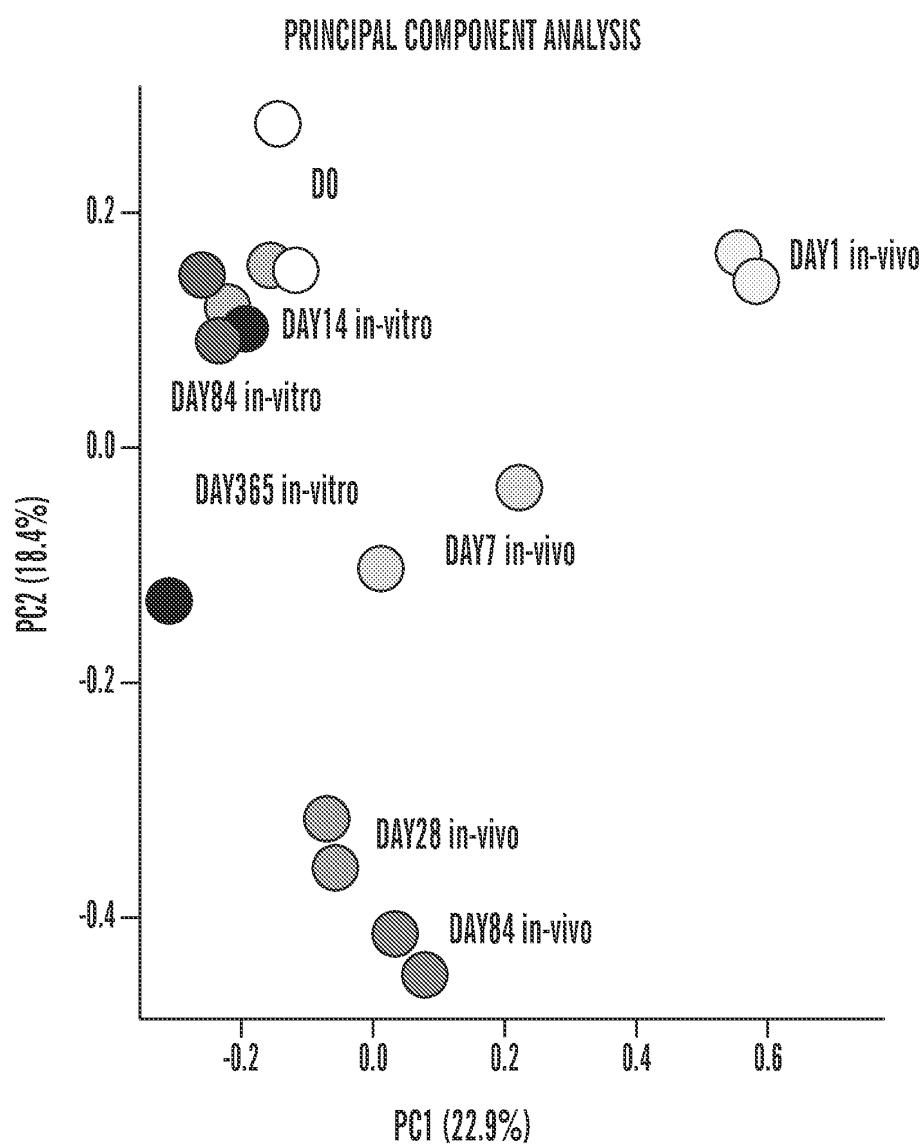
FIG. 4C



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**FIG. 5B****FIG. 5C**

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**FIG. 5D**

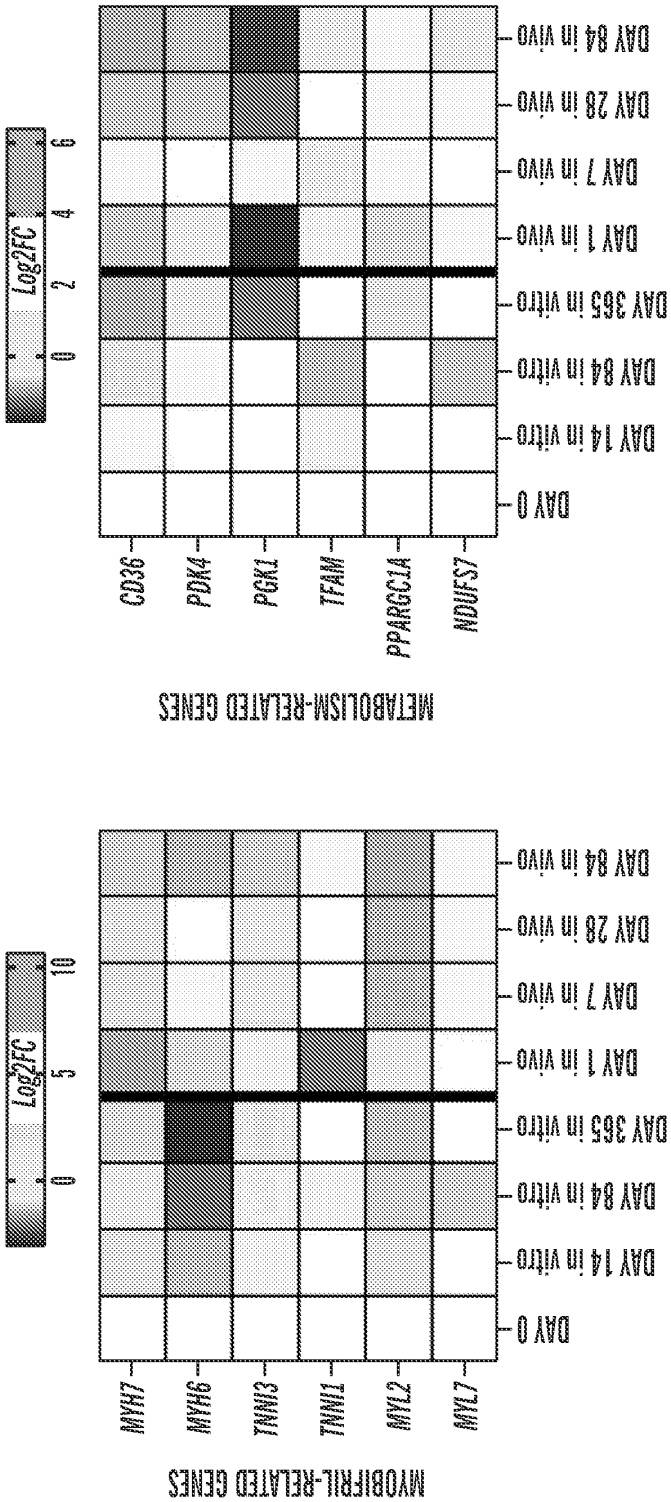


FIG. 5E

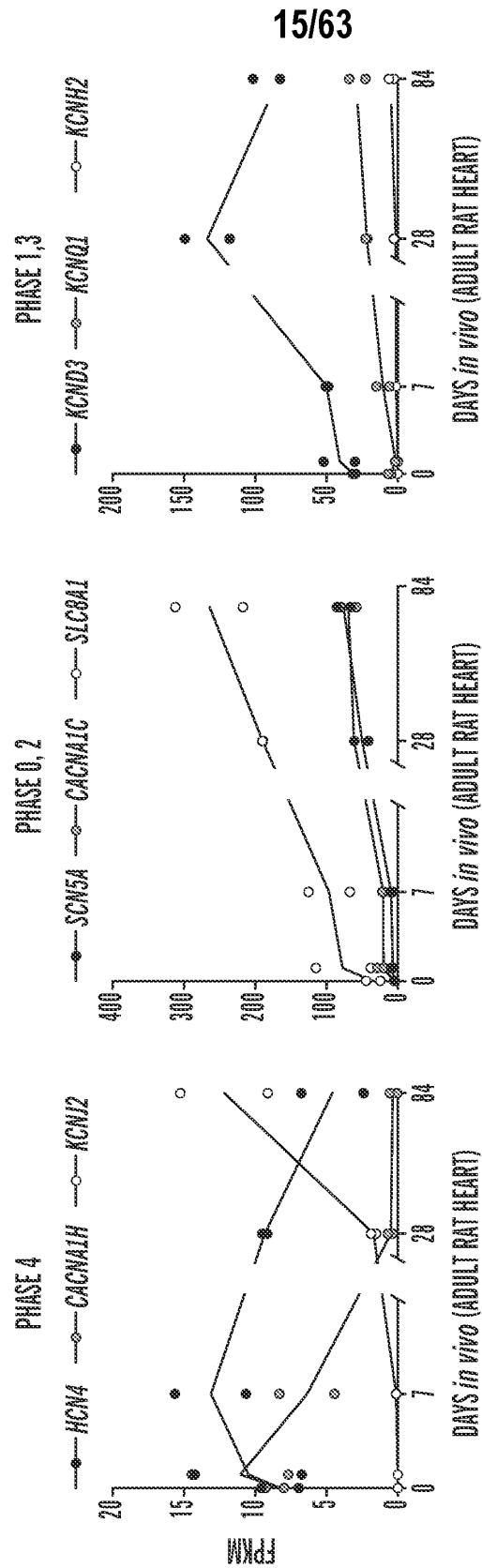


FIG. 5F

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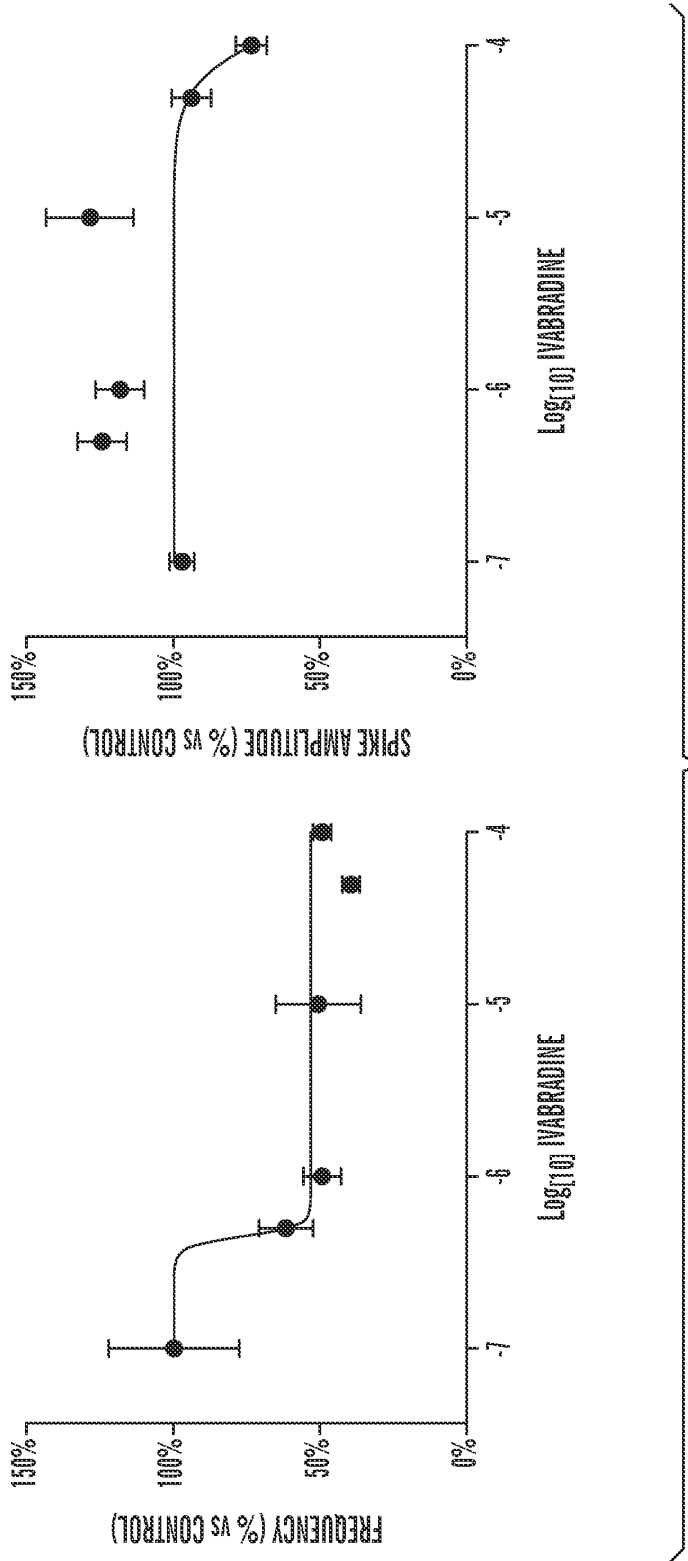
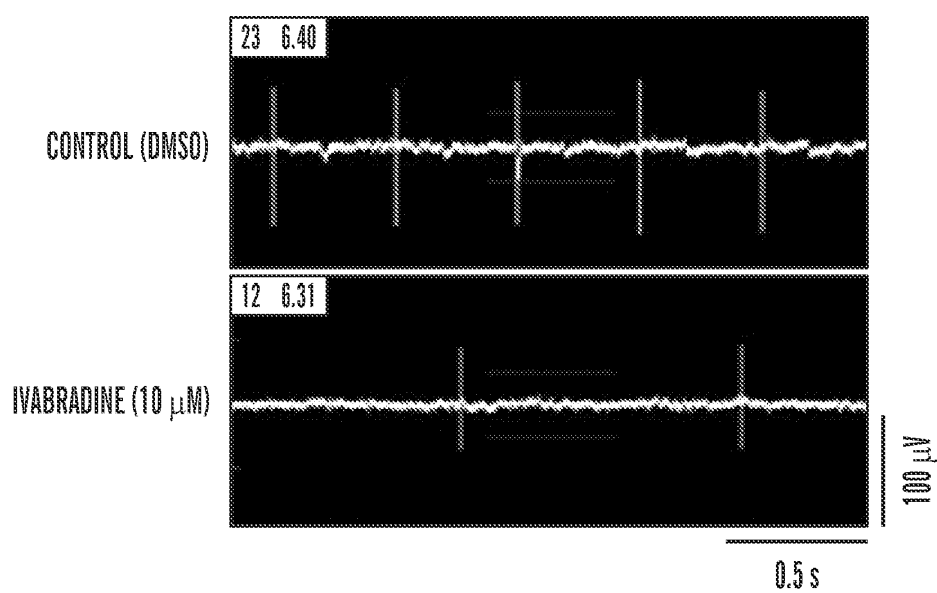


FIG. 6A

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**FIG. 6B**

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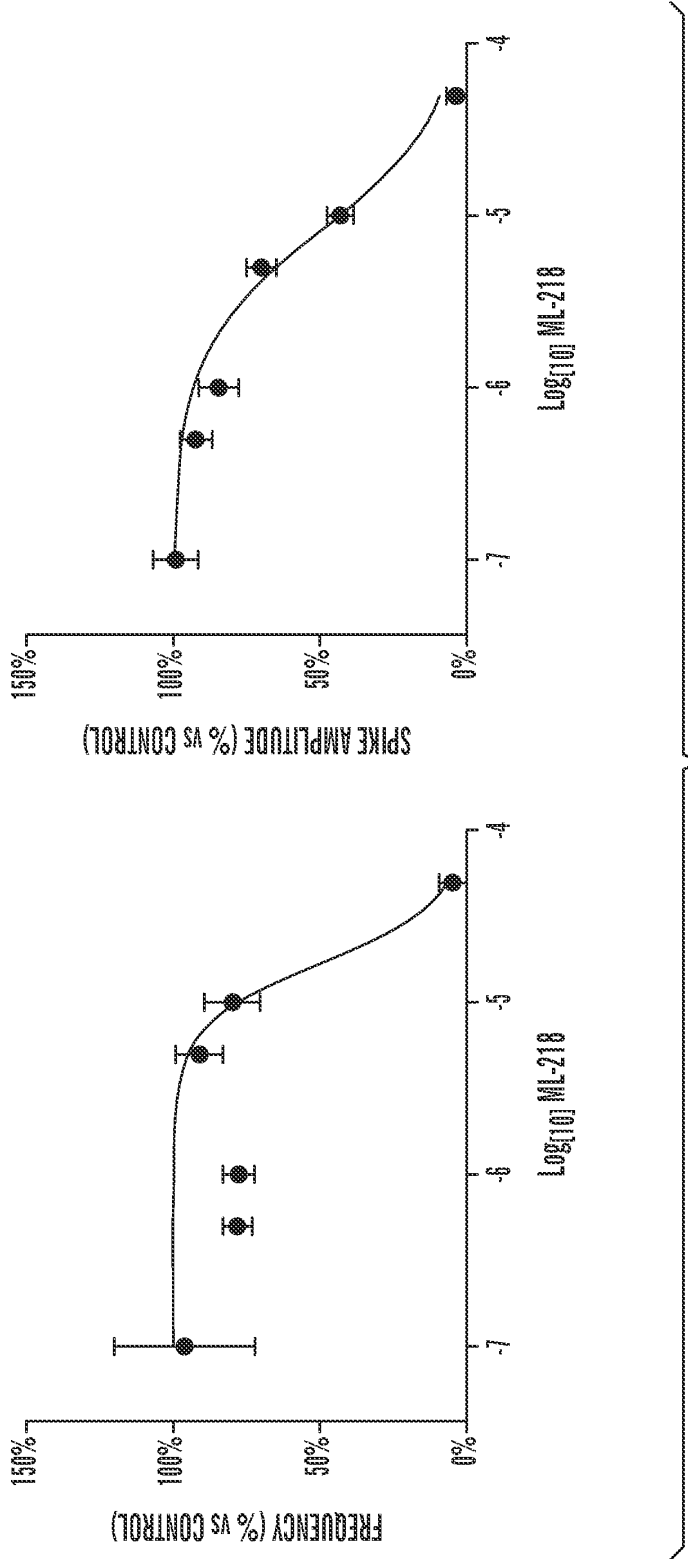
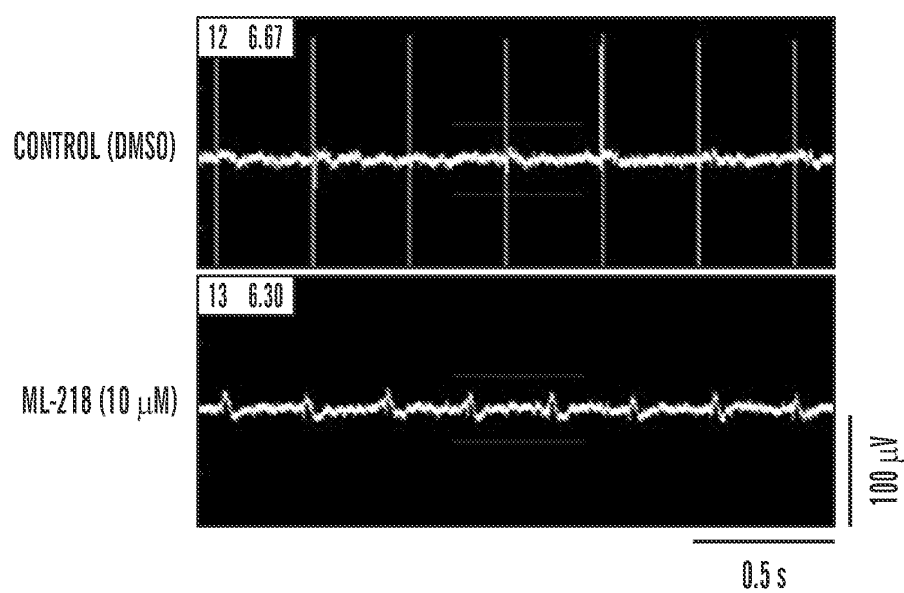


FIG. 6C

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**FIG. 6D**

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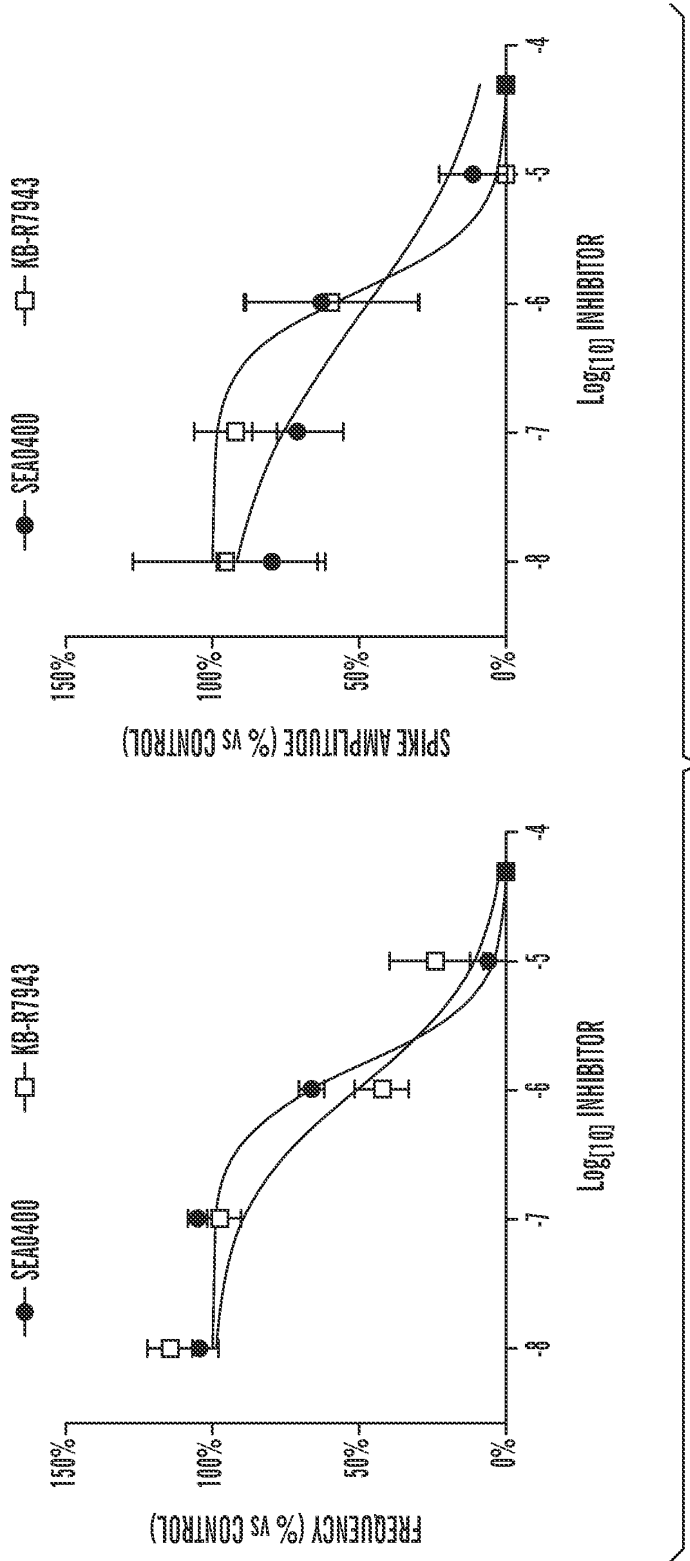
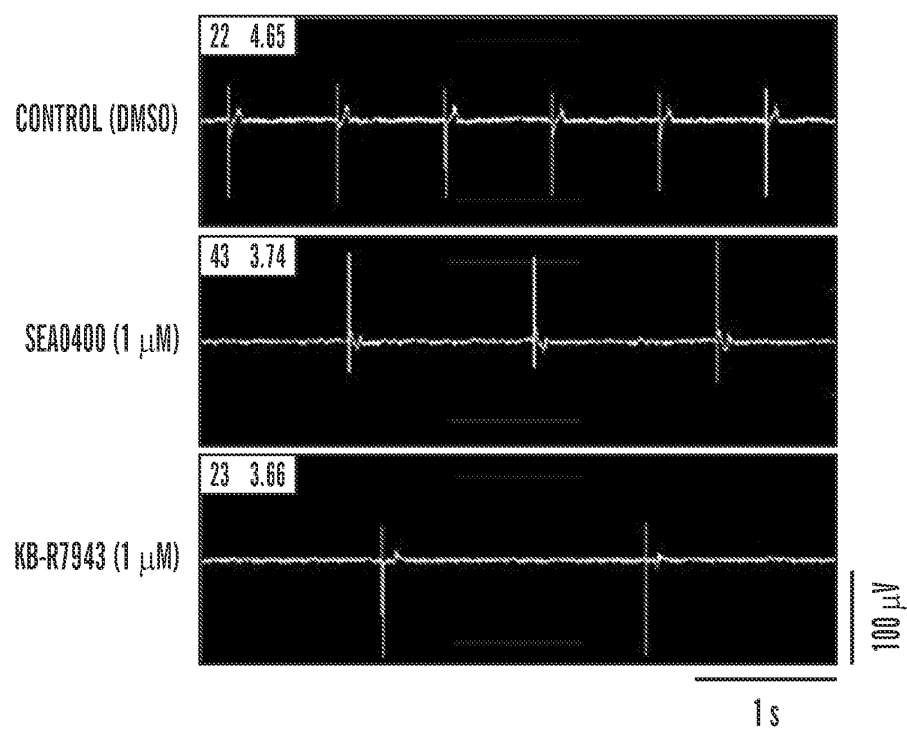


FIG. 6E

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**FIG. 6F**

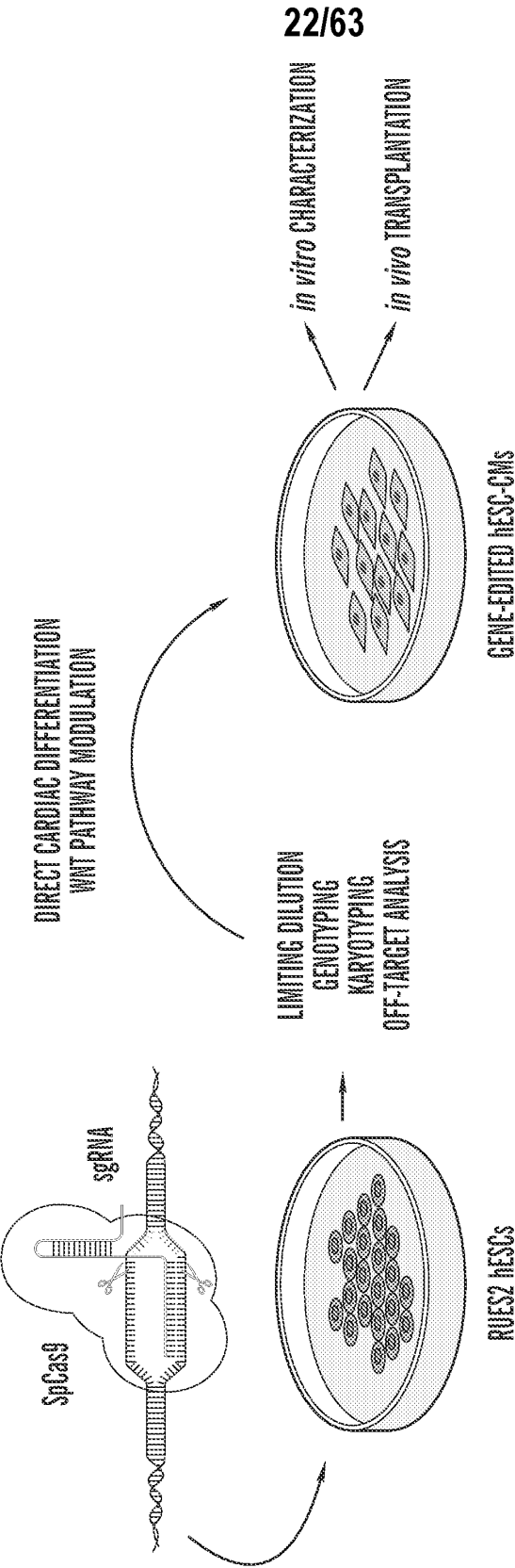
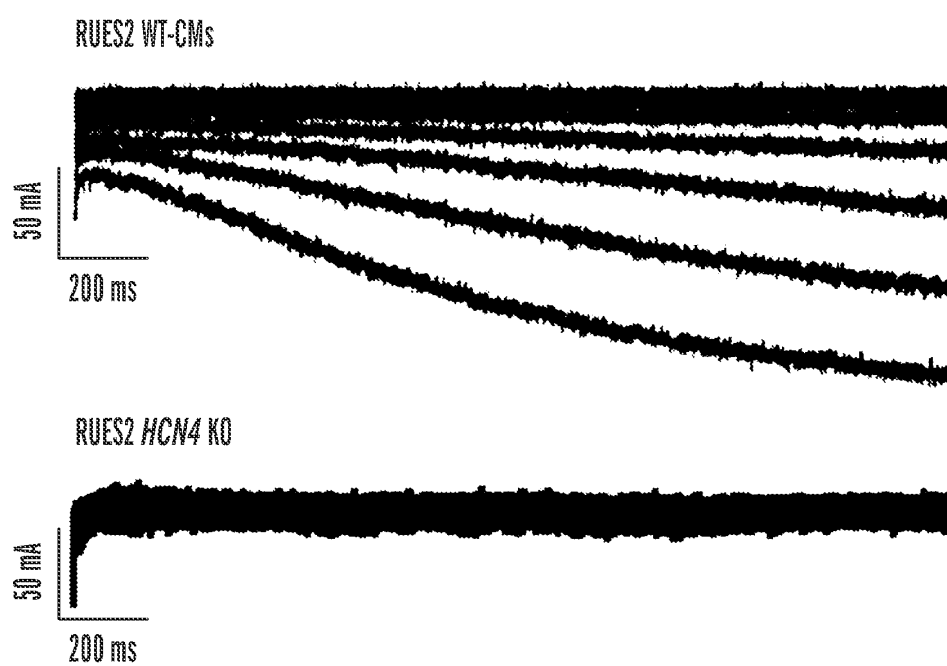


FIG. 7A

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**FIG. 7B**

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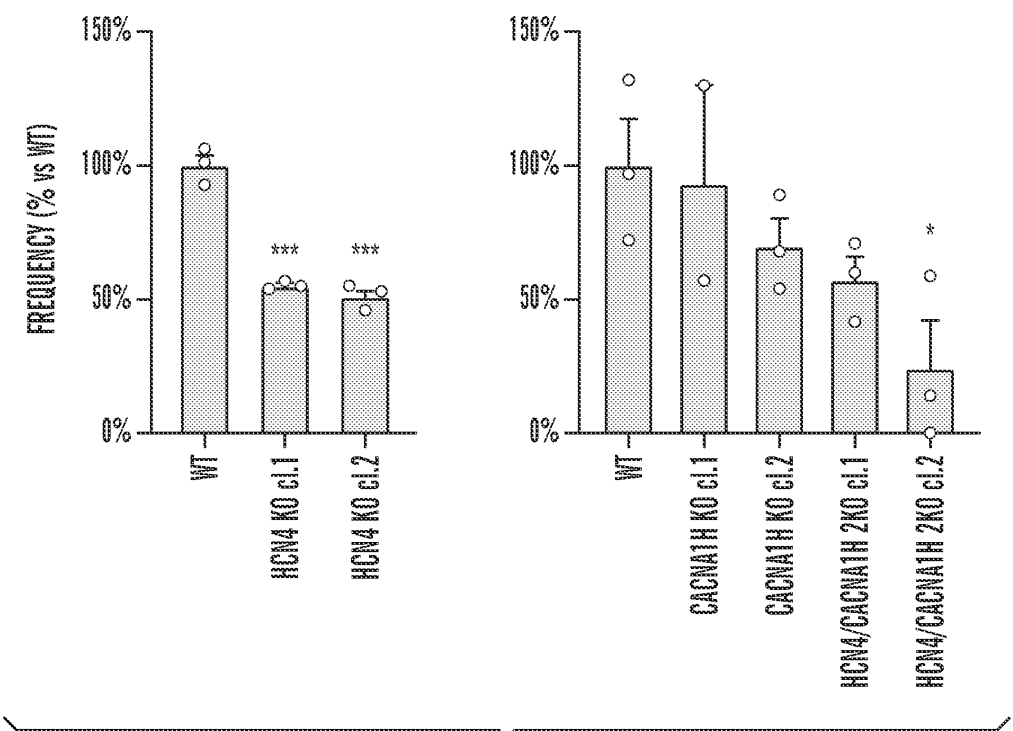


FIG. 7C

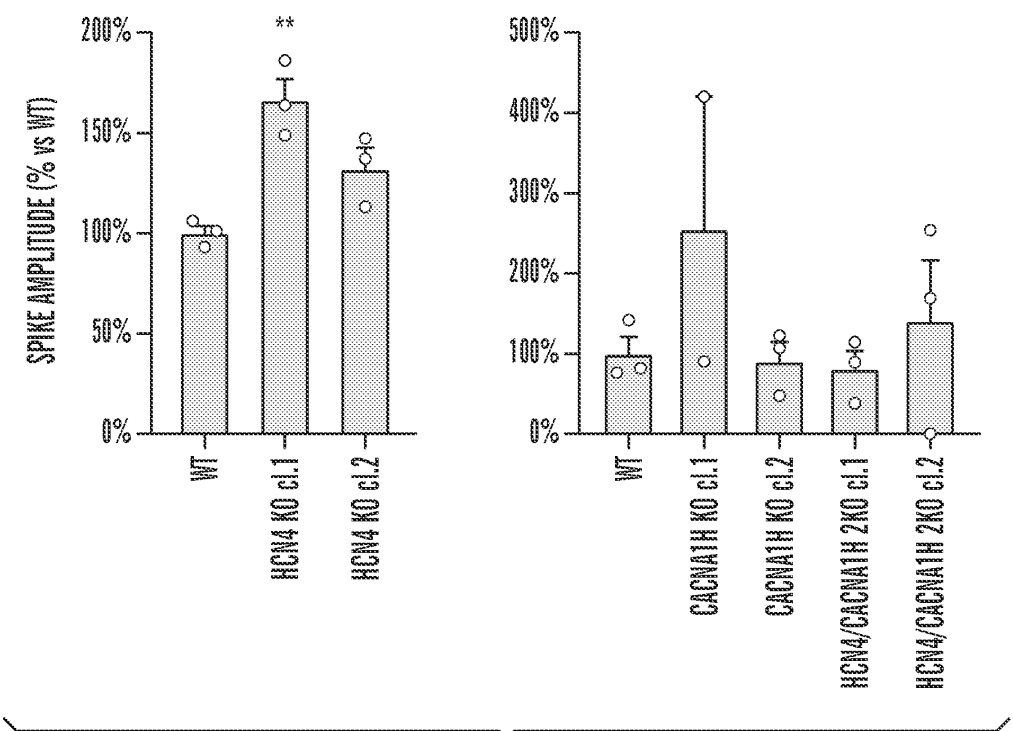


FIG. 7D

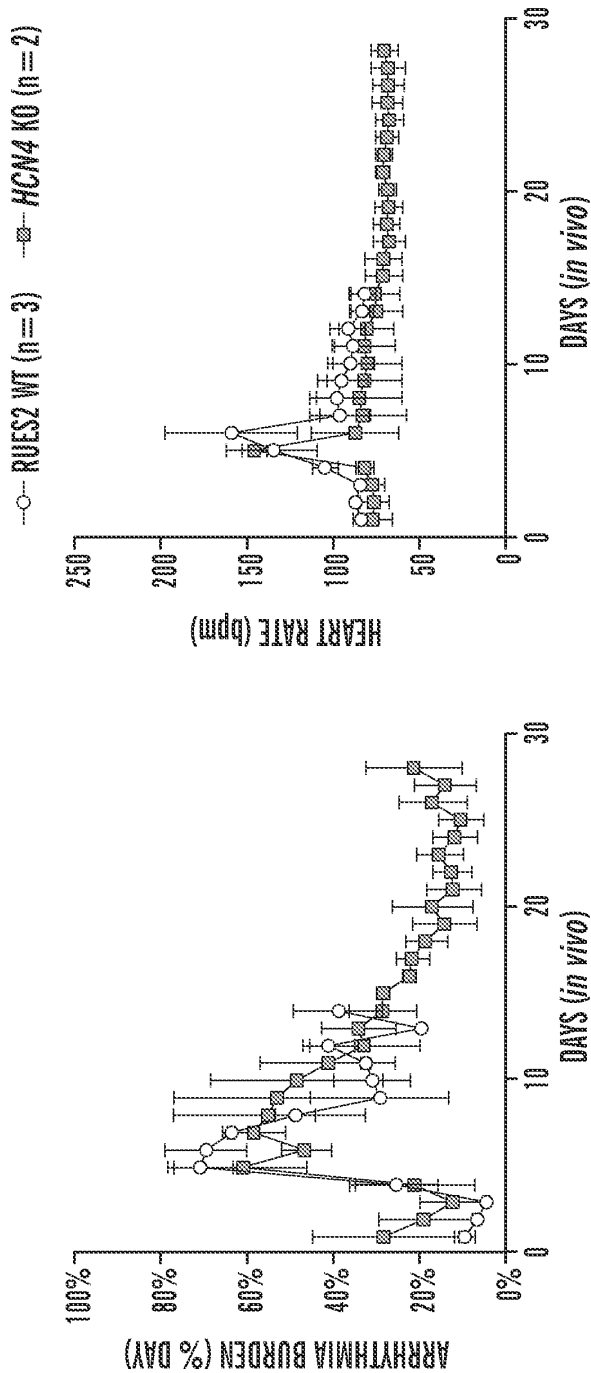
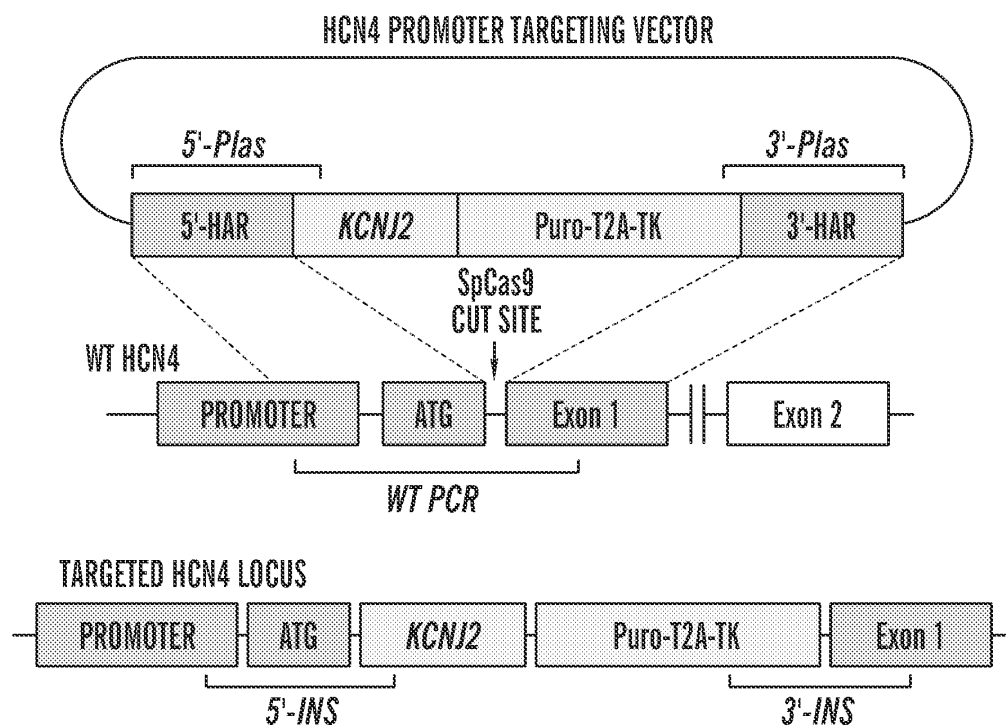


FIG. 7E

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**FIG. 8A**

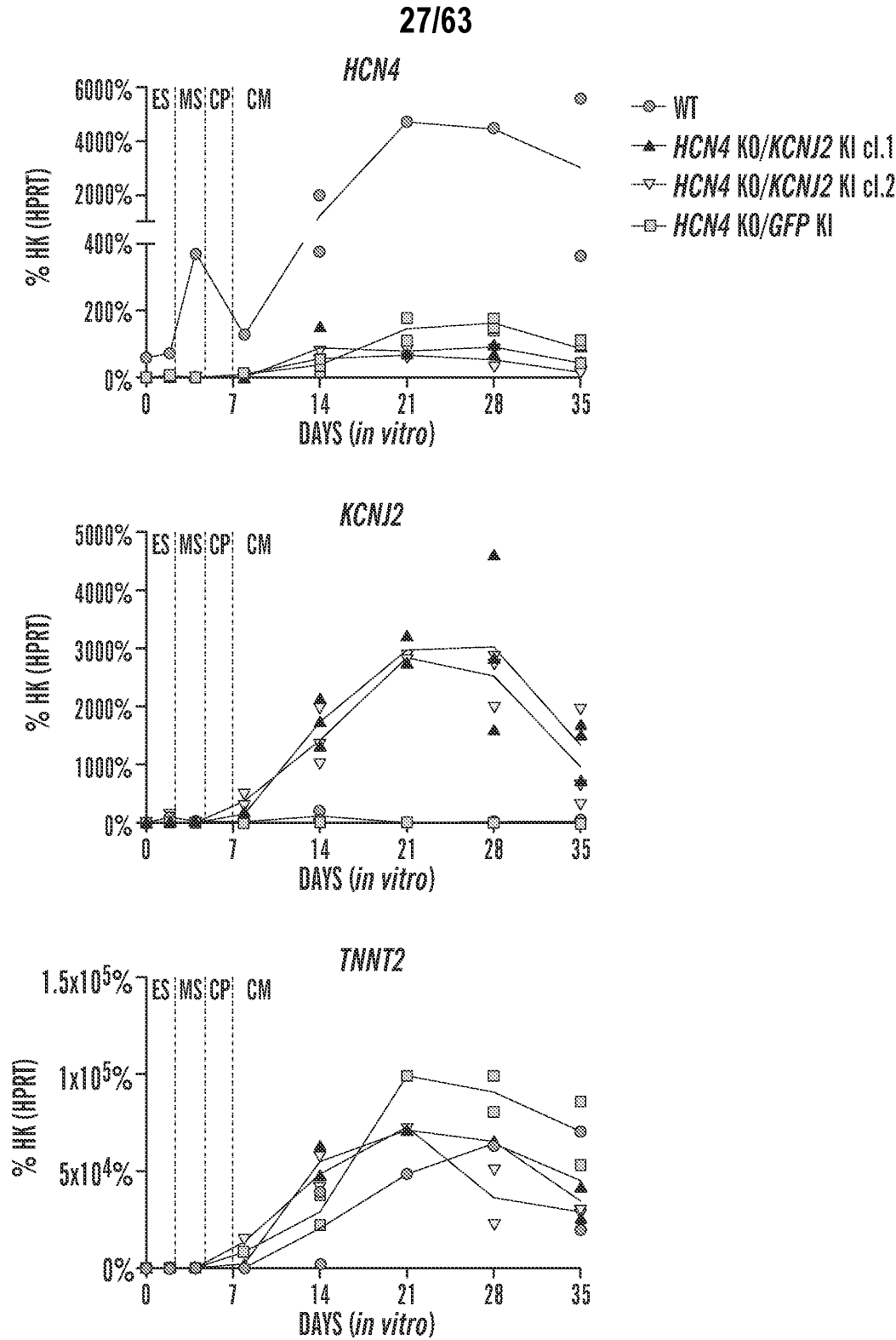


FIG. 8B

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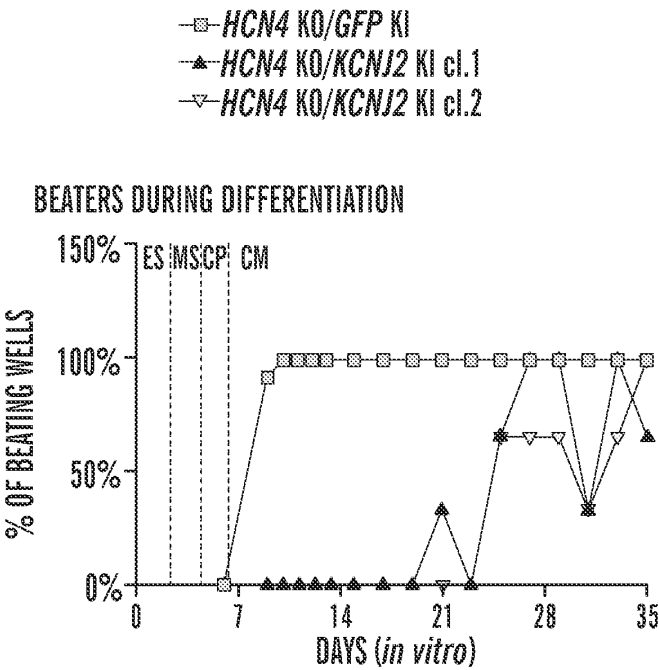


FIG. 8C

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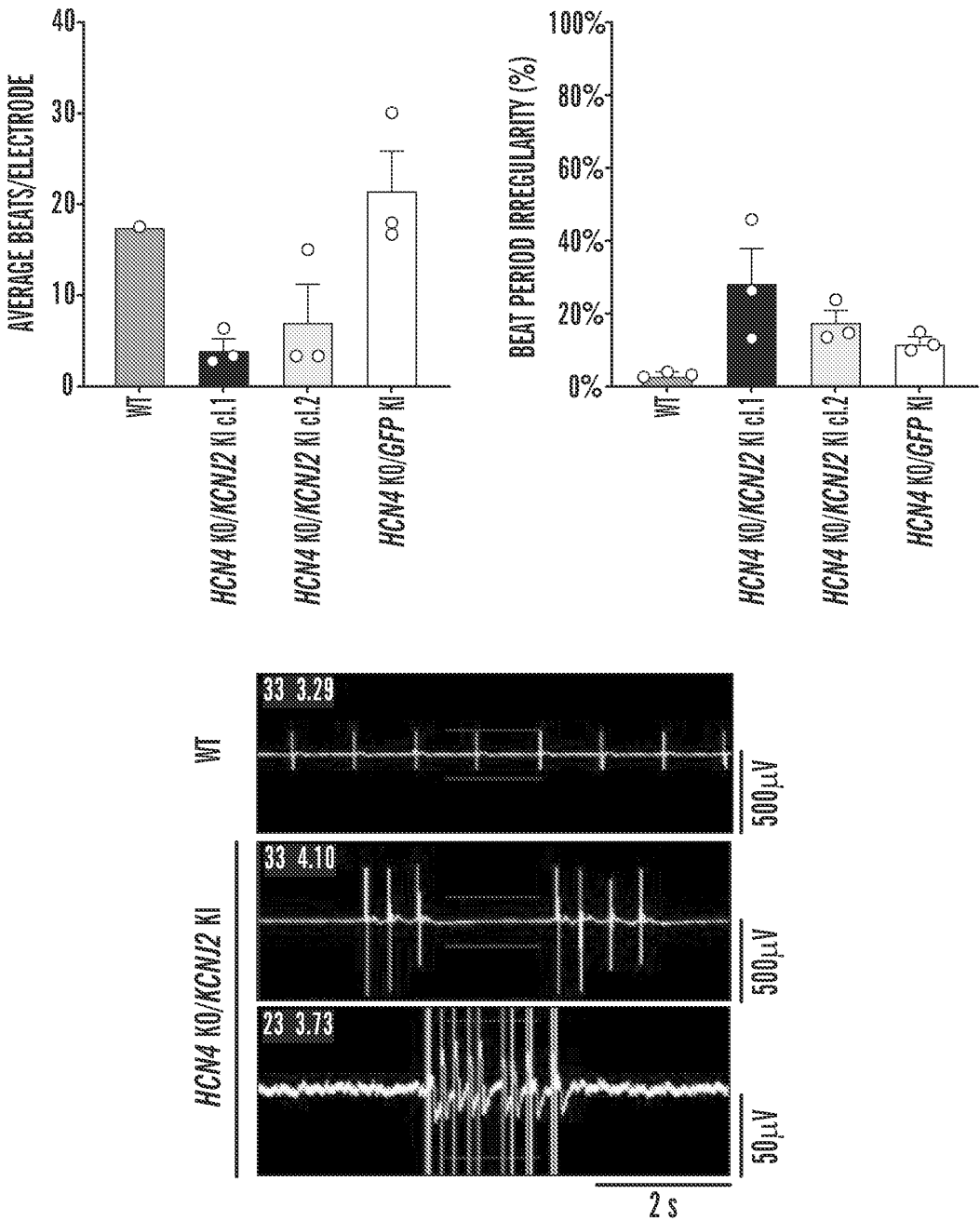


FIG. 8D

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○ RUES2 WT (n=3) ■ HCN4 KO/KCNJ2 KI (n=2)

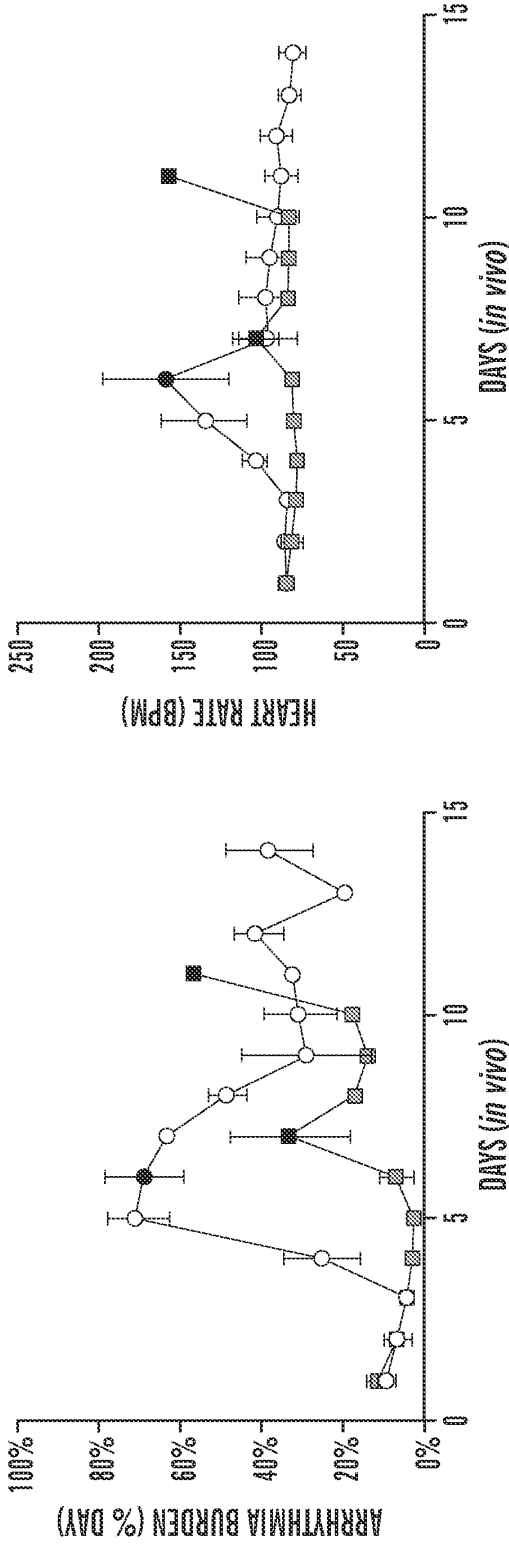


FIG. 8E

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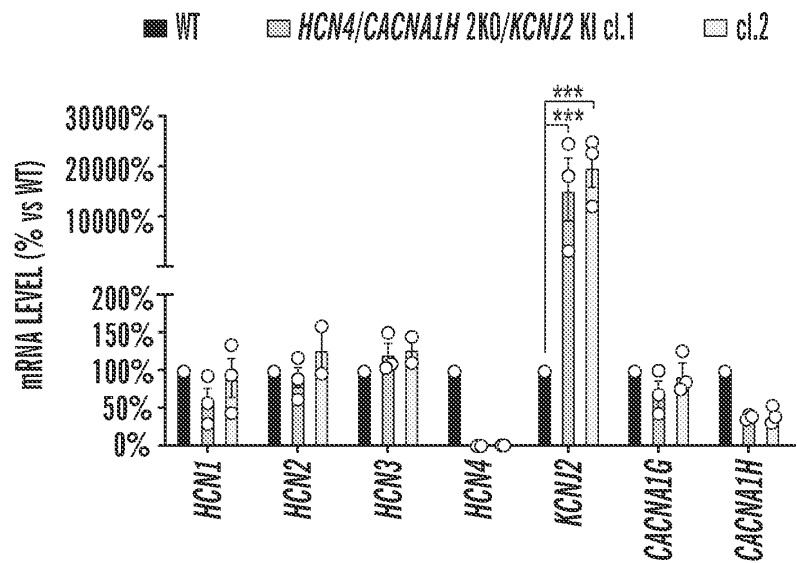


FIG. 9A

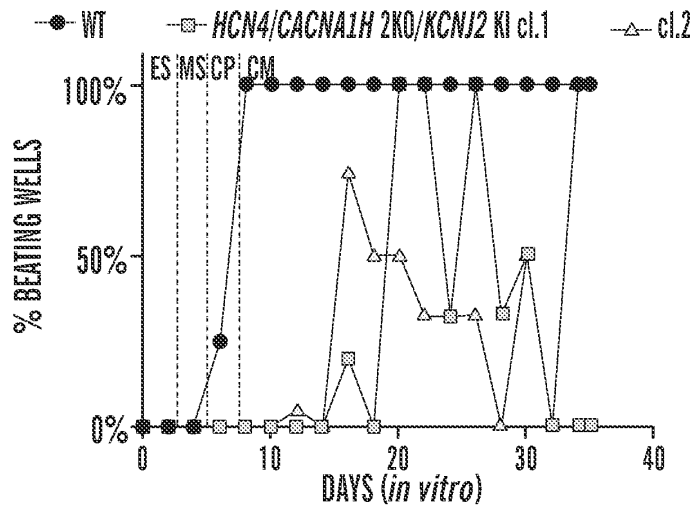


FIG. 9B

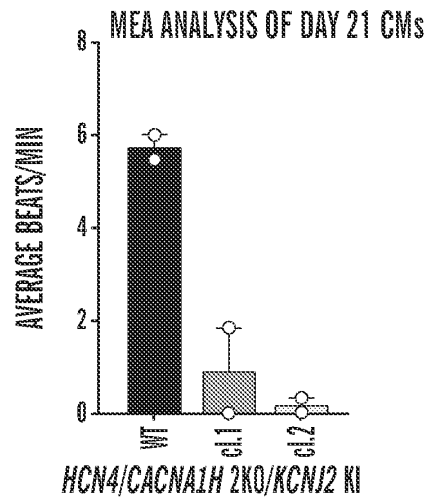


FIG. 9C

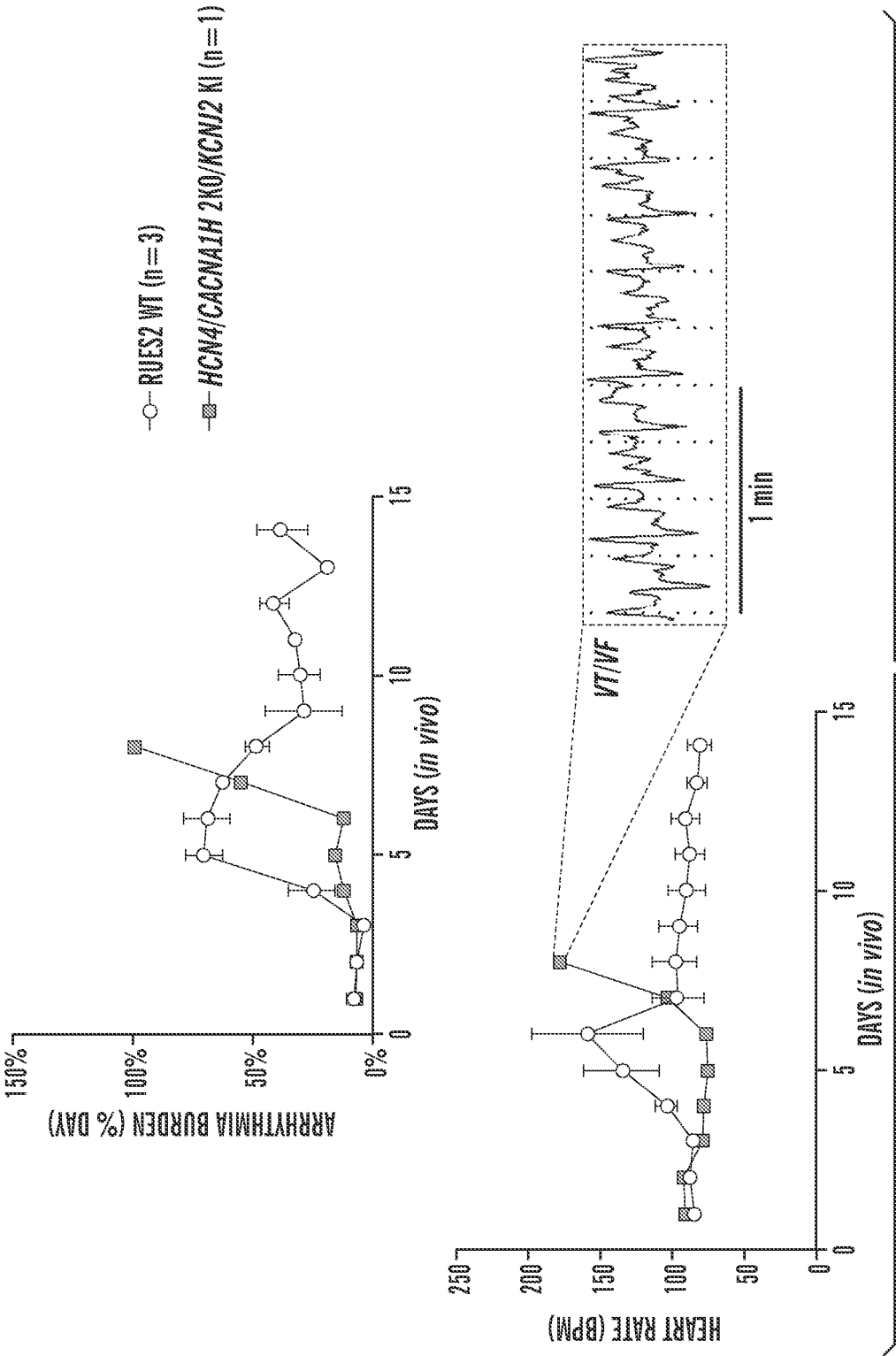


FIG. 9D

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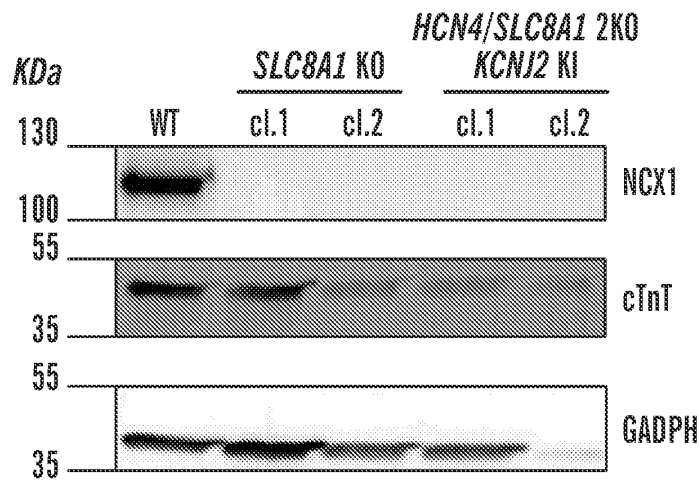


FIG. 9E

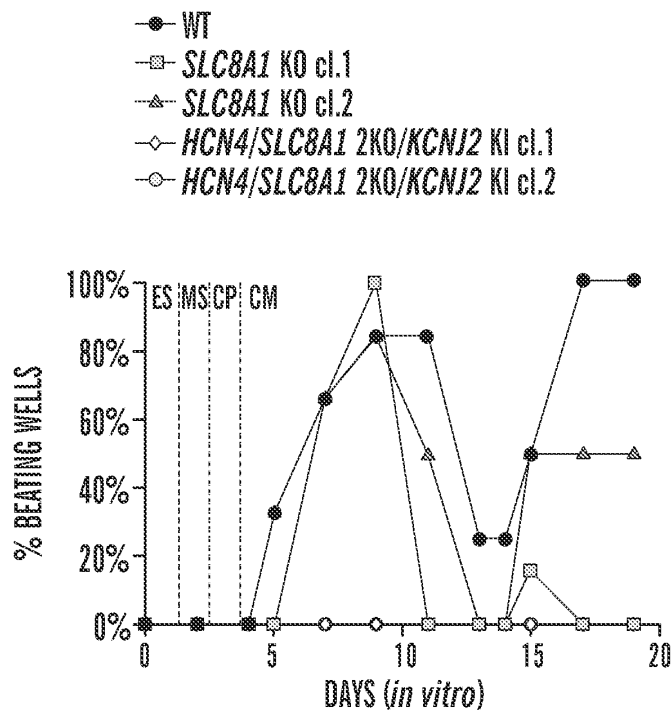


FIG. 9F

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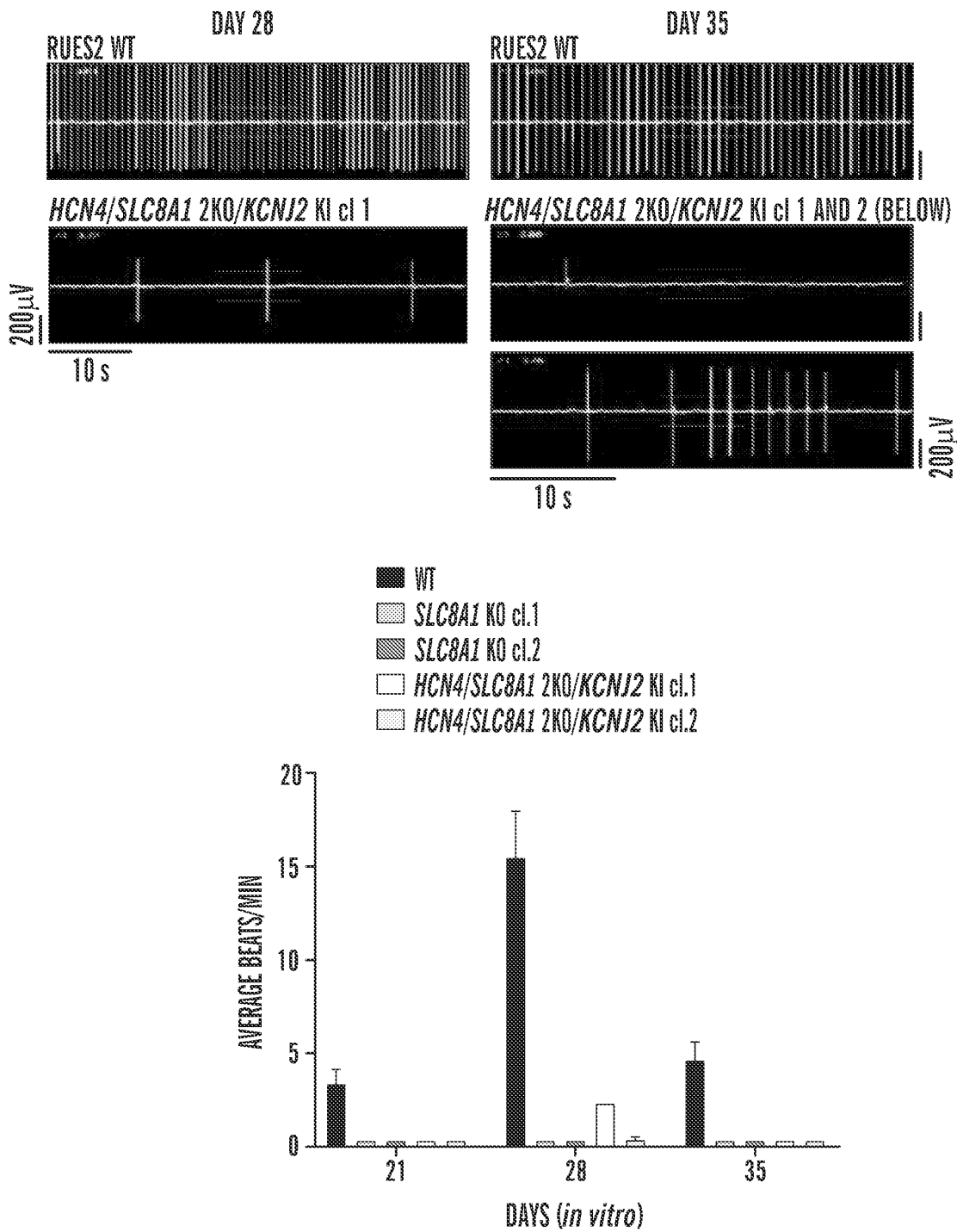


FIG. 9G

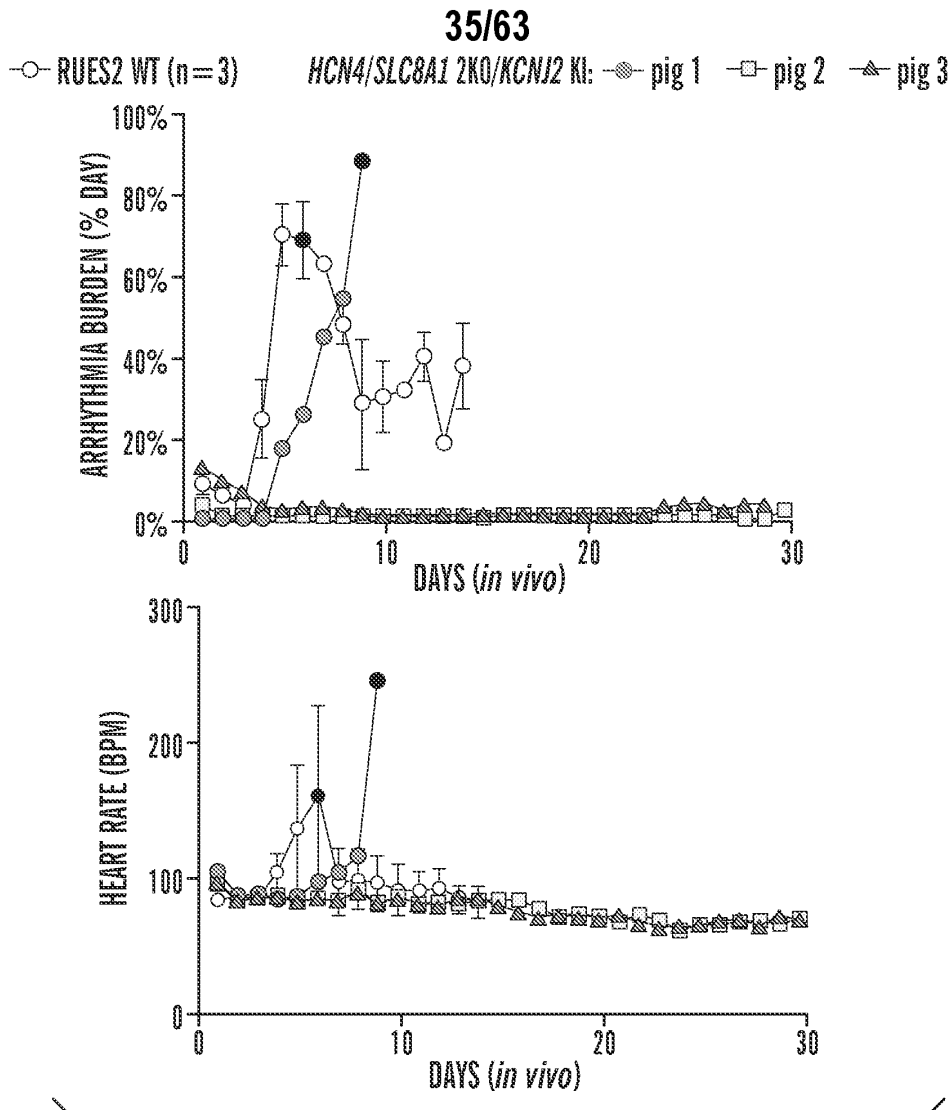


FIG. 9H

β -Myosin HEAVY CHAIN STAINING



FIG. 9I

300 μ M

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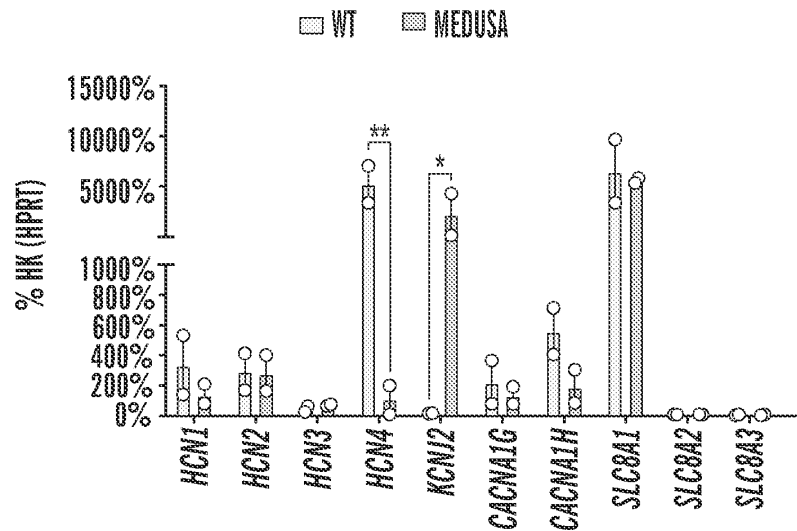


FIG. 10A

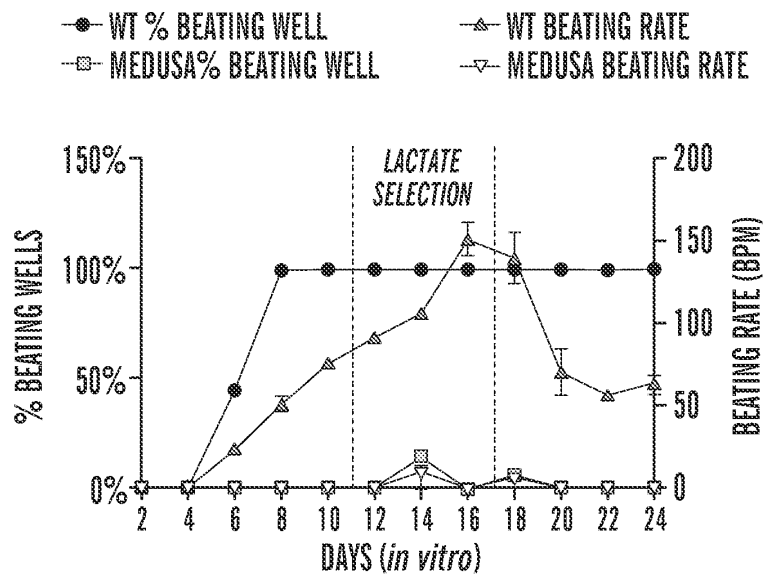


FIG. 10B

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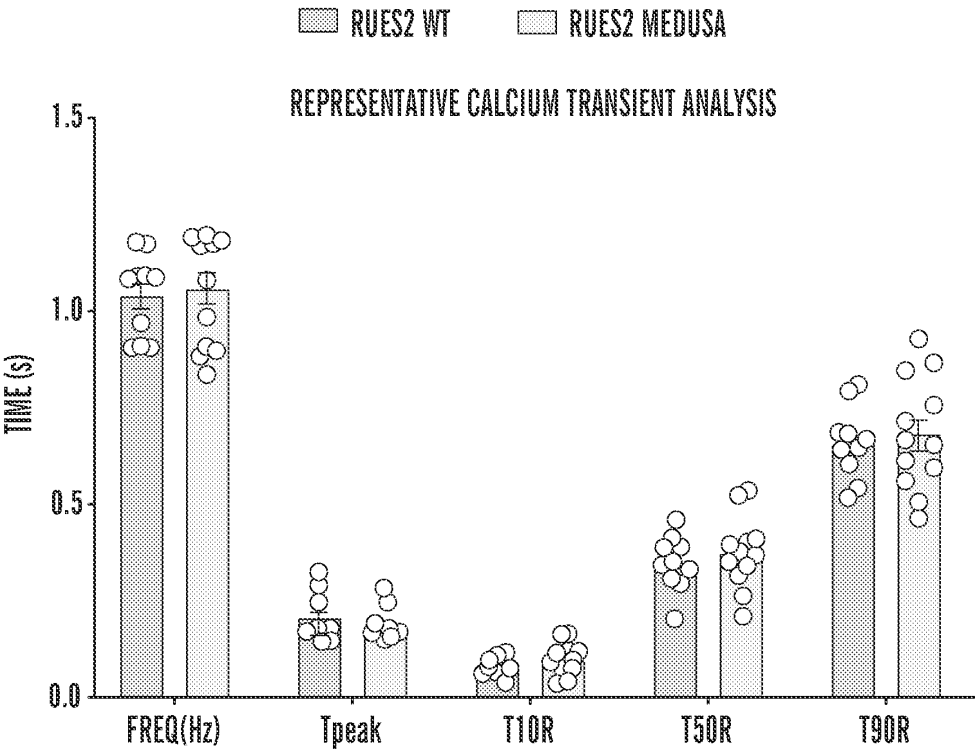


FIG. 10C

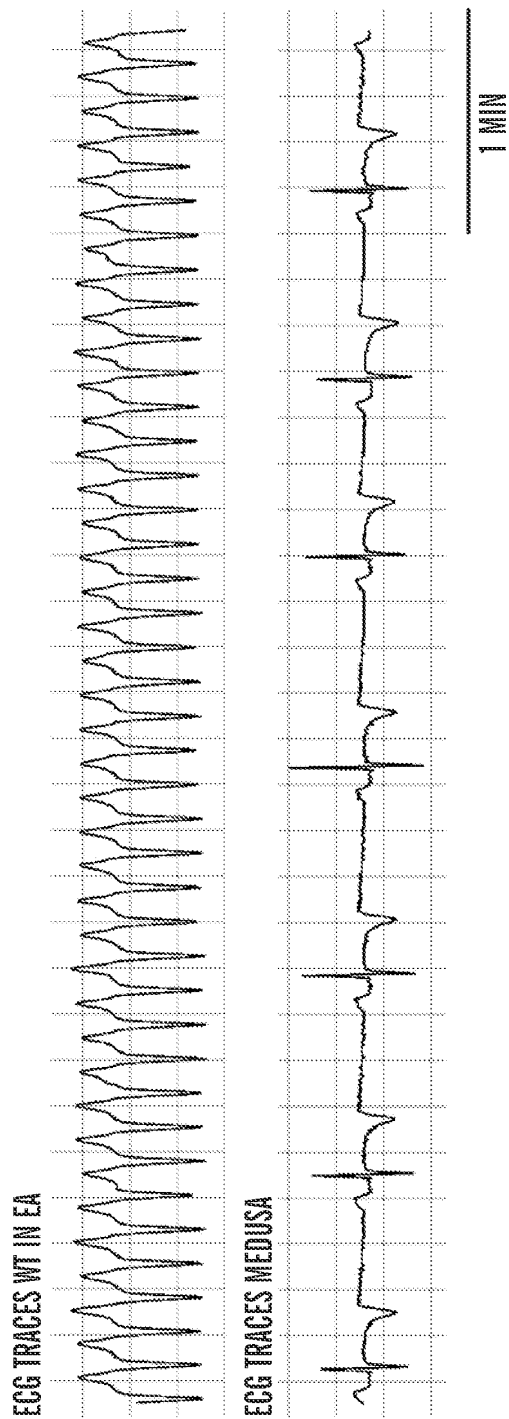


FIG. 11A

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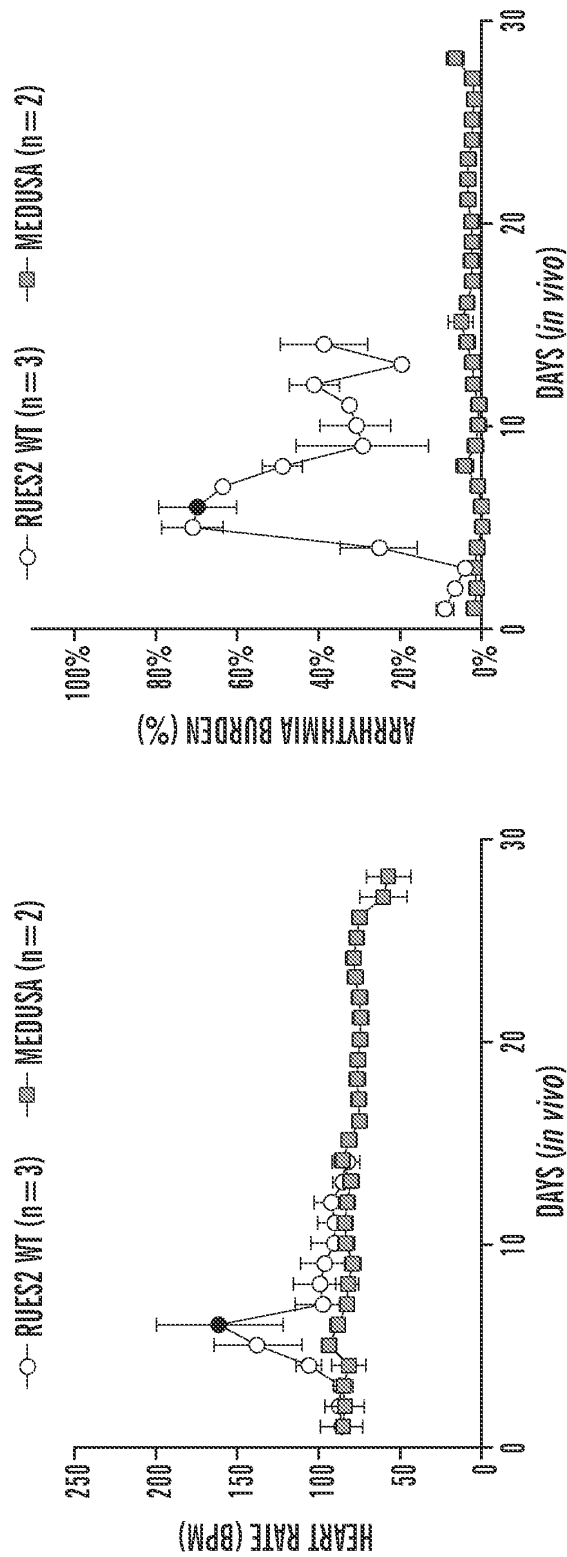


FIG. 11B

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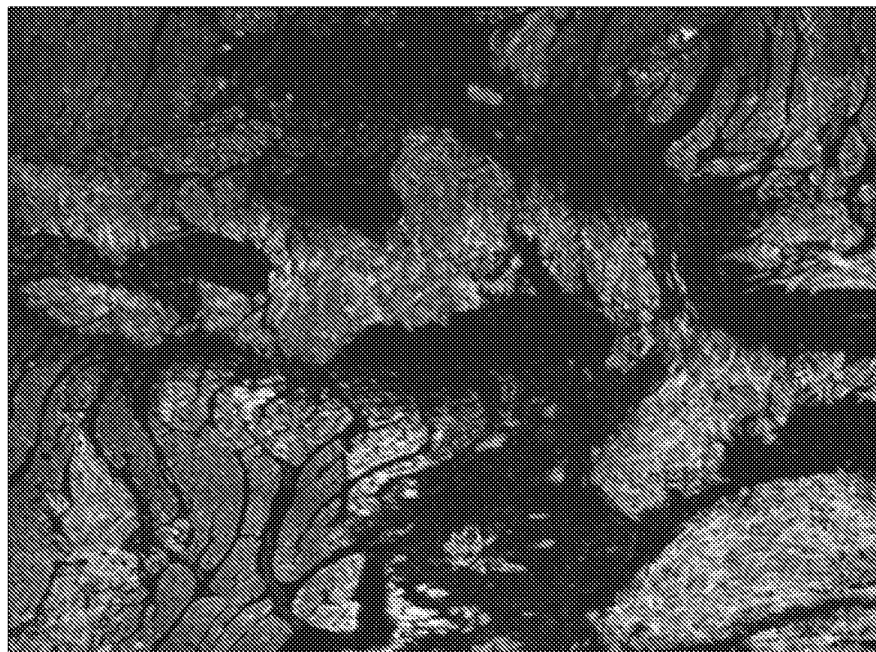


FIG. 11C

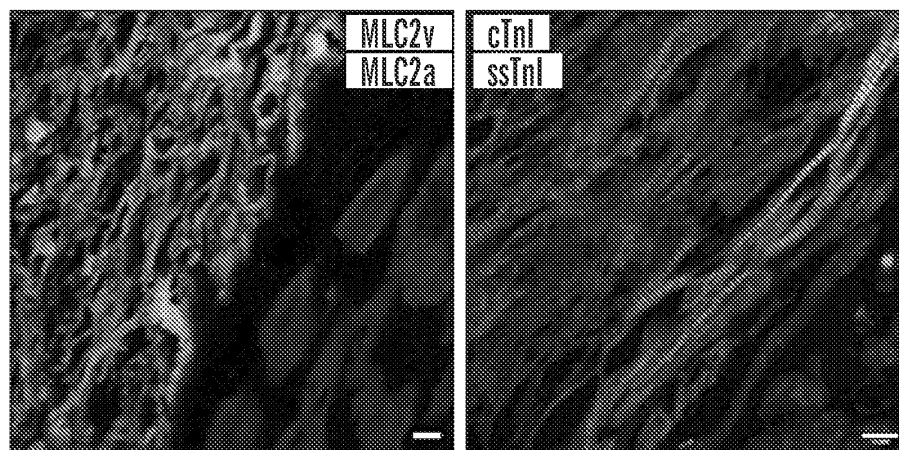


FIG. 11D

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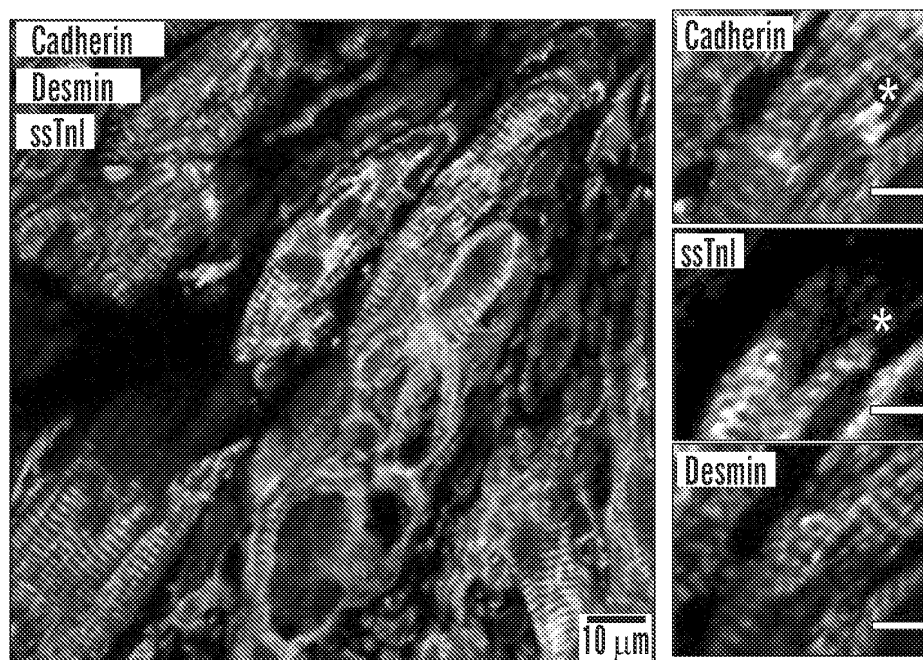


FIG. 11E

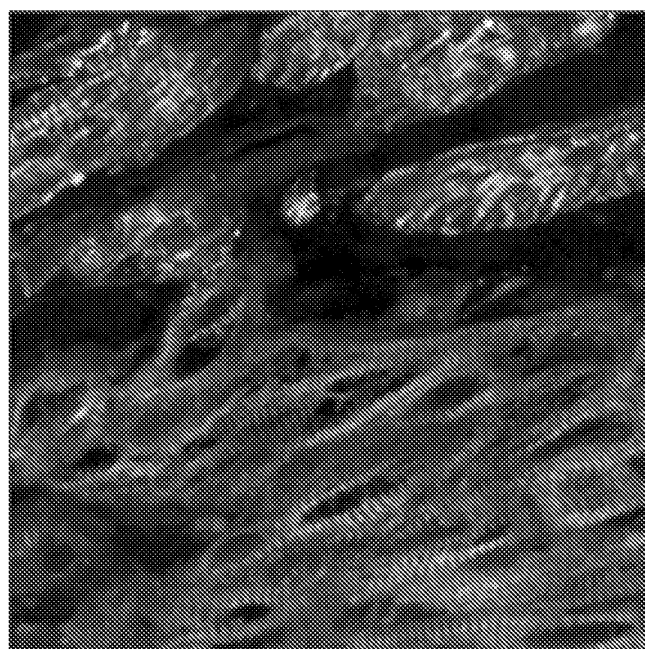
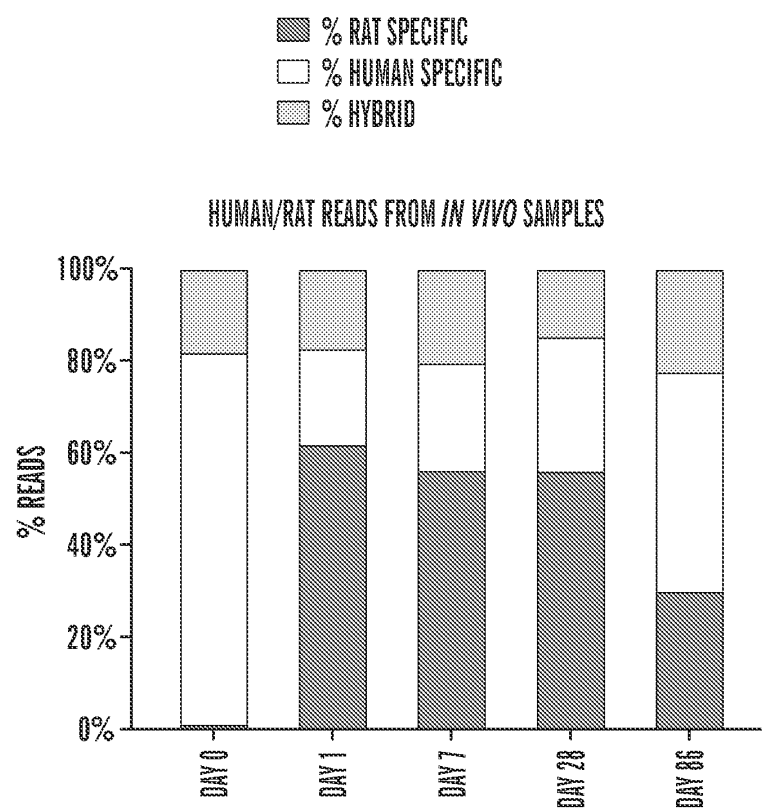


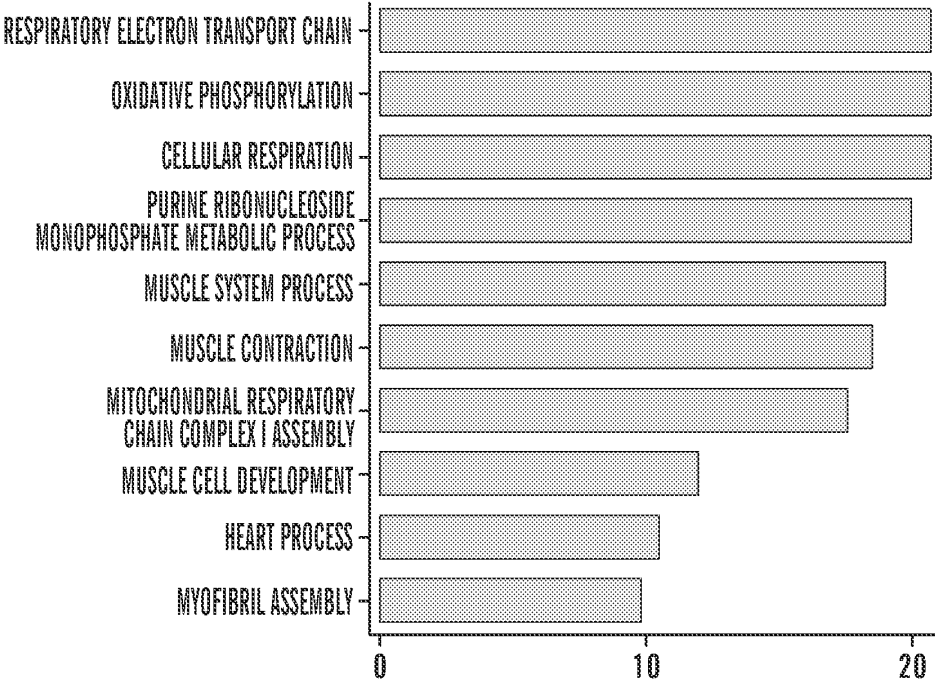
FIG. 11F

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**FIG. 12A**

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GO TERM (UPREGULATED, 3 MONTHS in *vivo* vs in *vitro*)



GO TERM (DOWNREGULATED, 3 MONTHS in *vivo* vs in *vitro*)

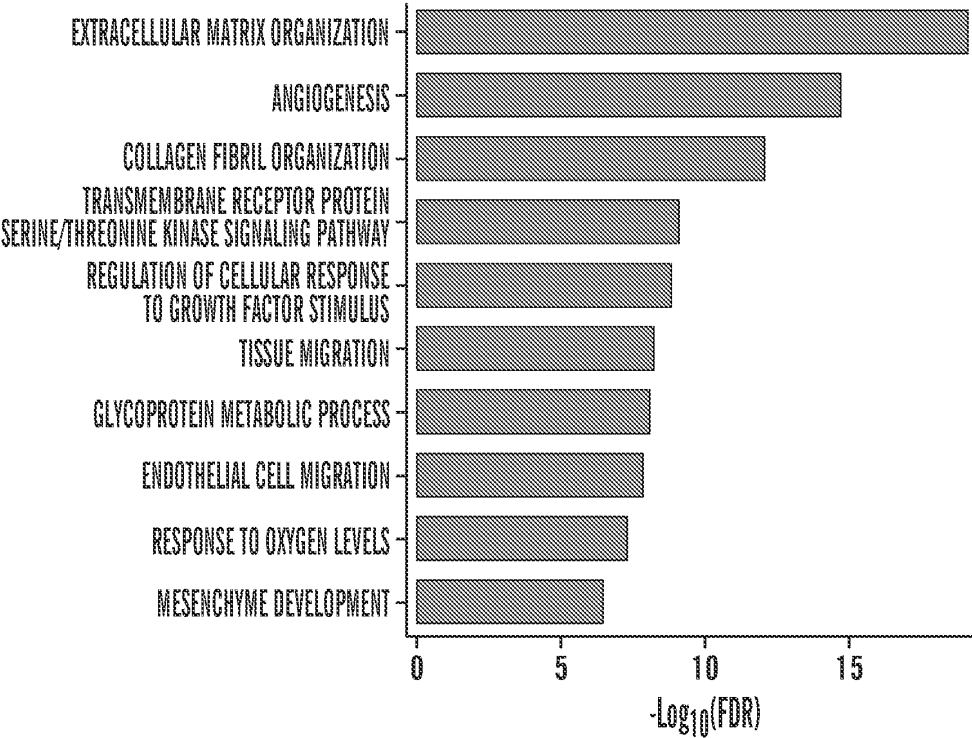


FIG. 12B

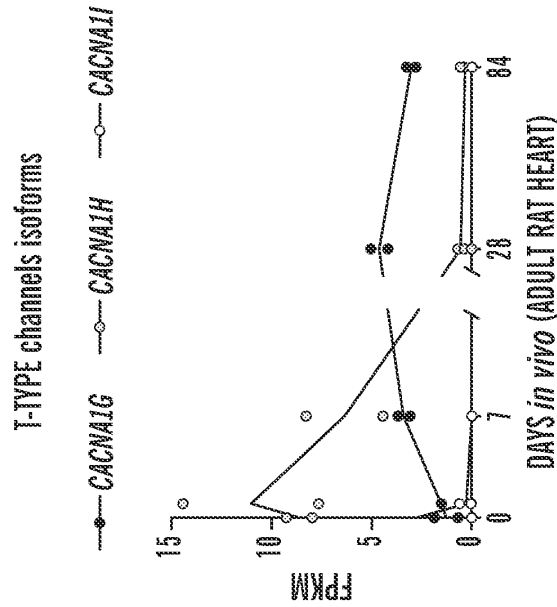


FIG. 12C

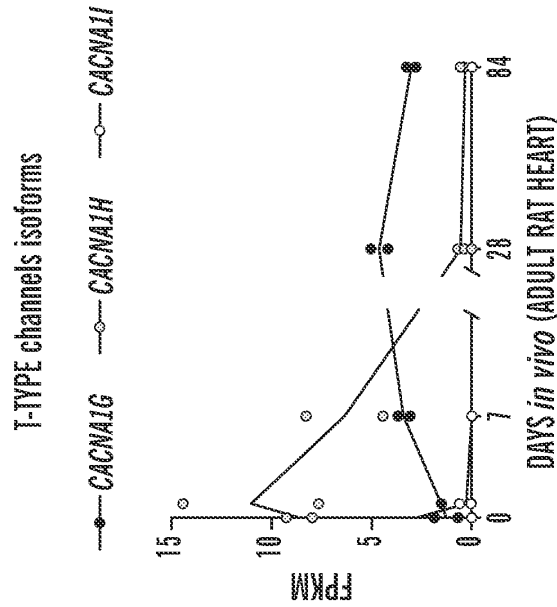


FIG. 12D

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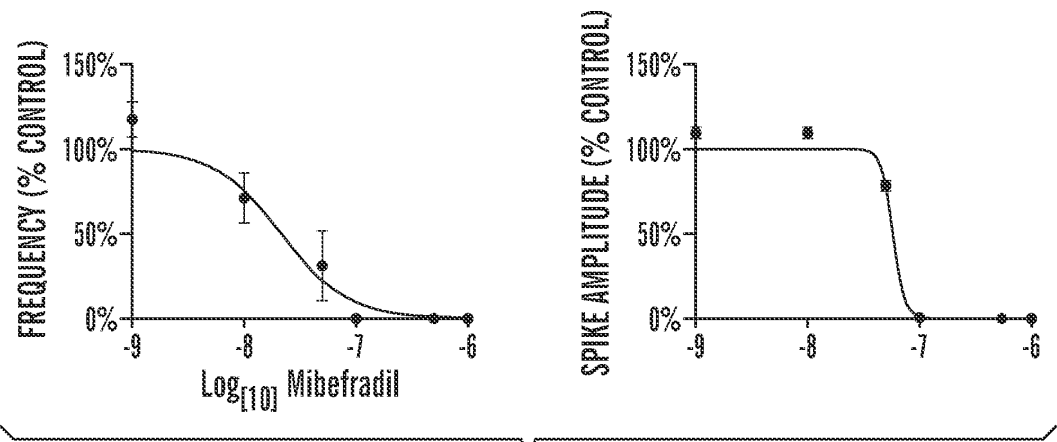


FIG. 13A

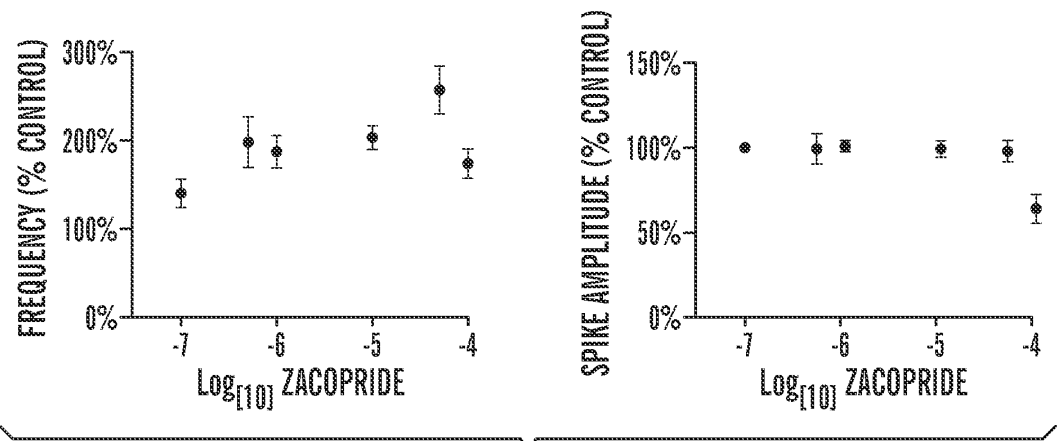


FIG. 13B

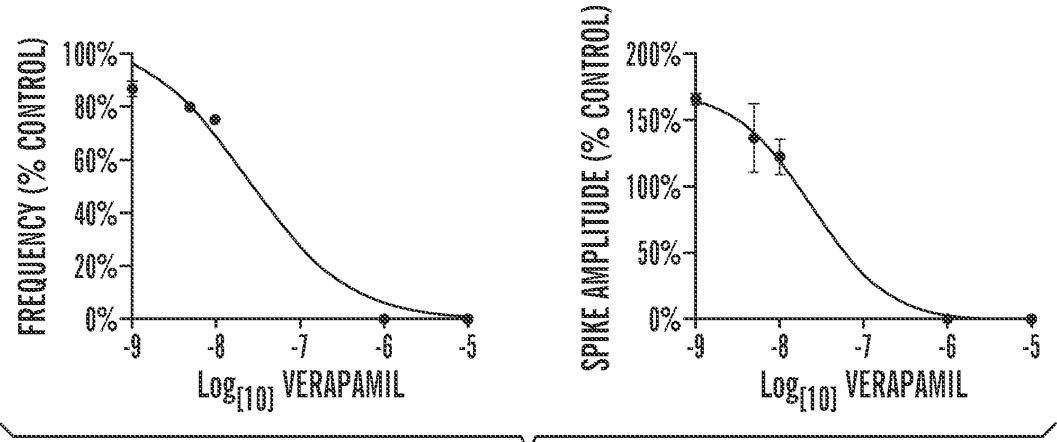


FIG. 13C

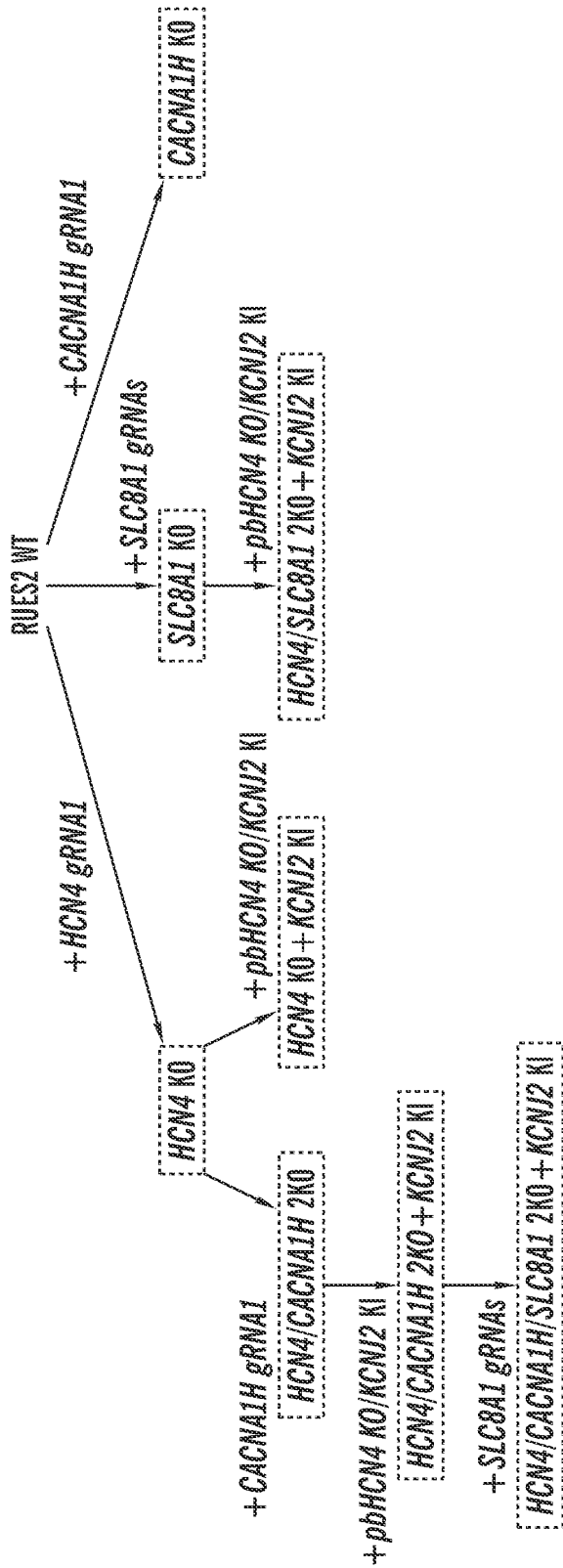


FIG. 14A

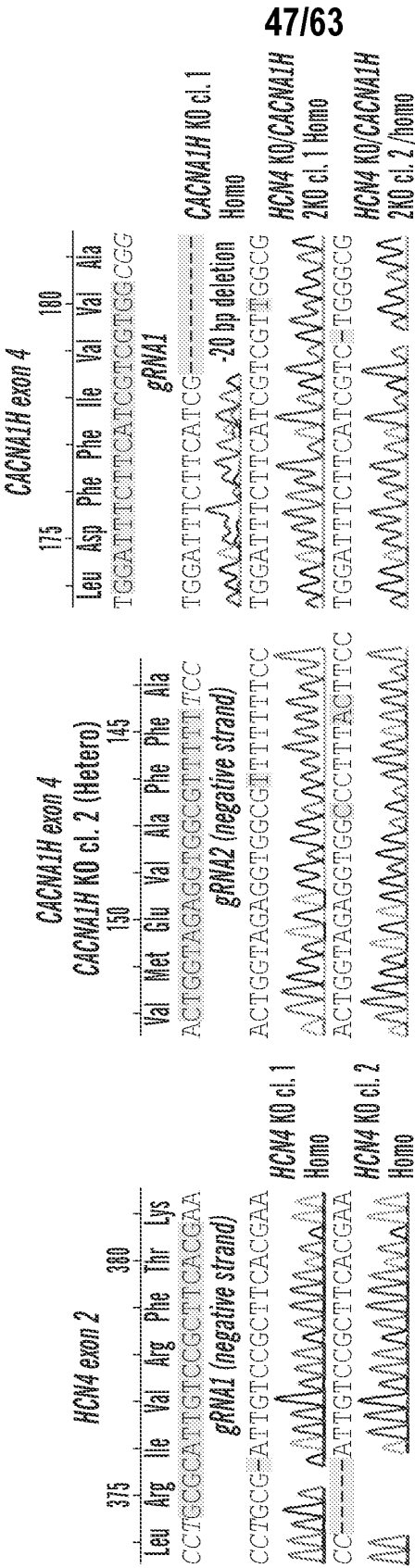


FIG. 14B

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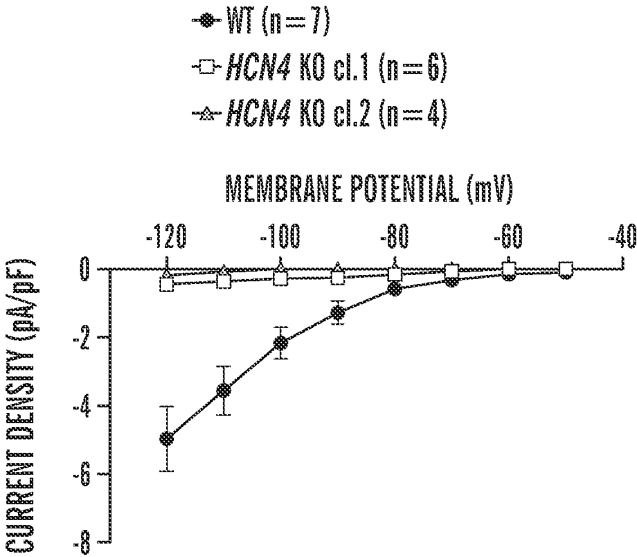


FIG. 14C

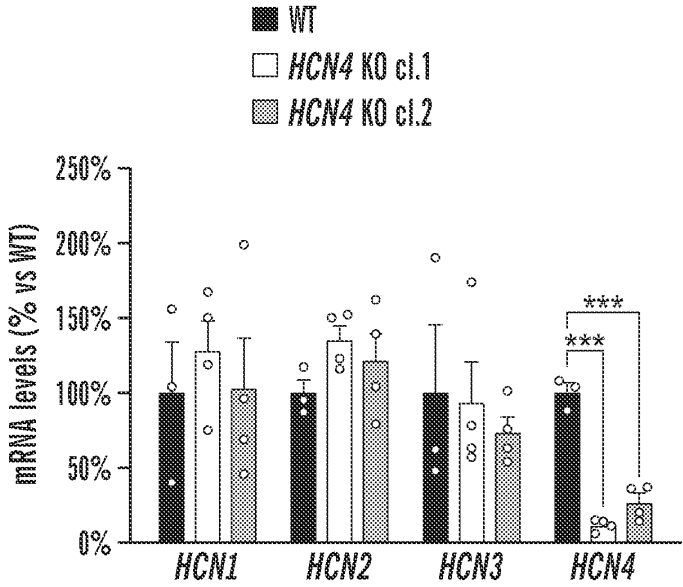


FIG. 14D

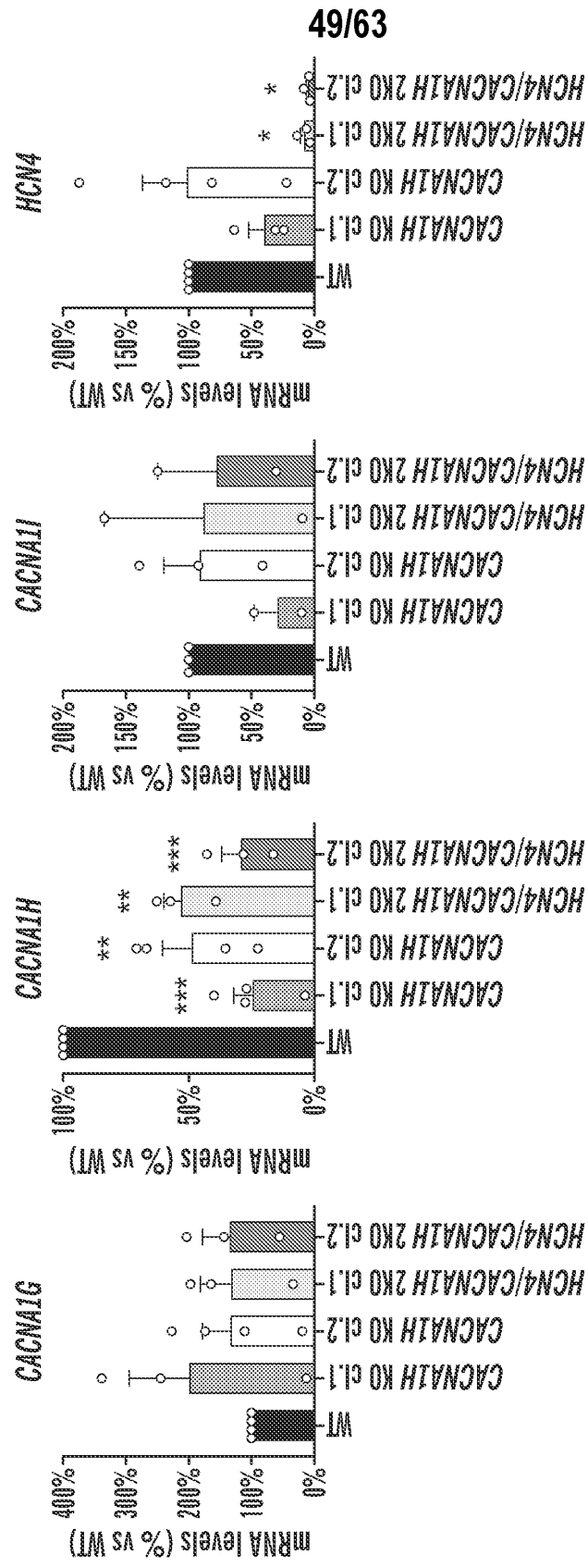


FIG. 14E

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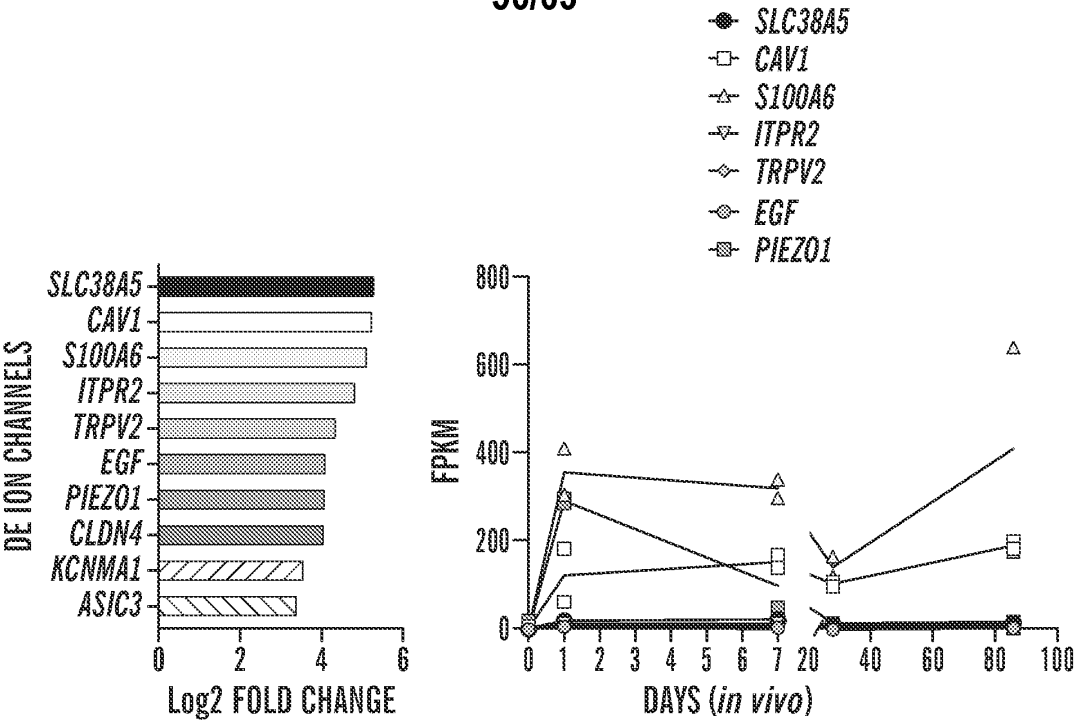


FIG. 15A

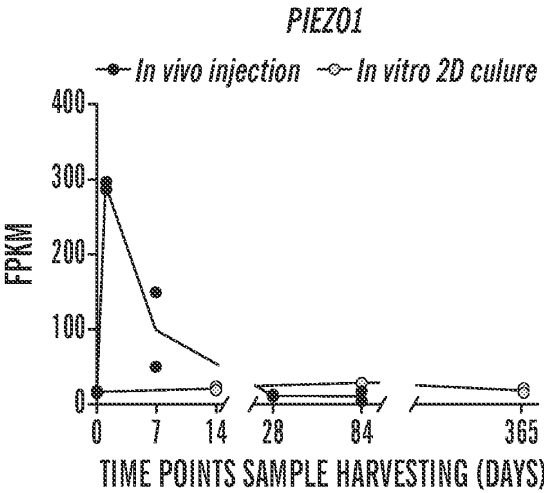


FIG. 15B

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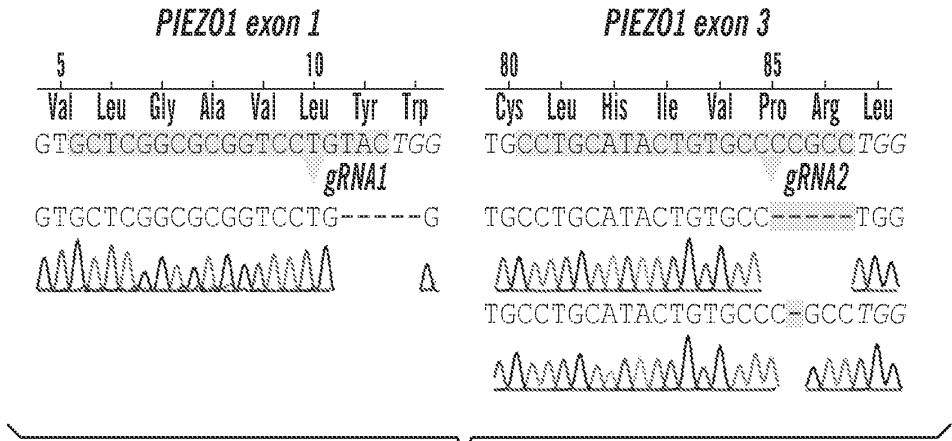


FIG. 15C

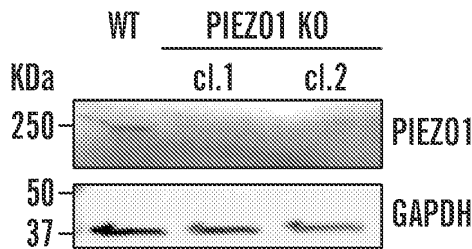


FIG. 15D

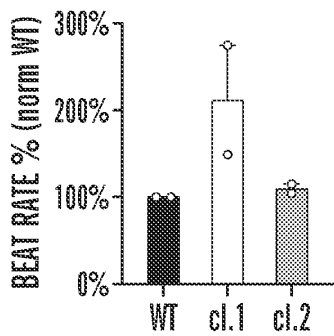


FIG. 15E

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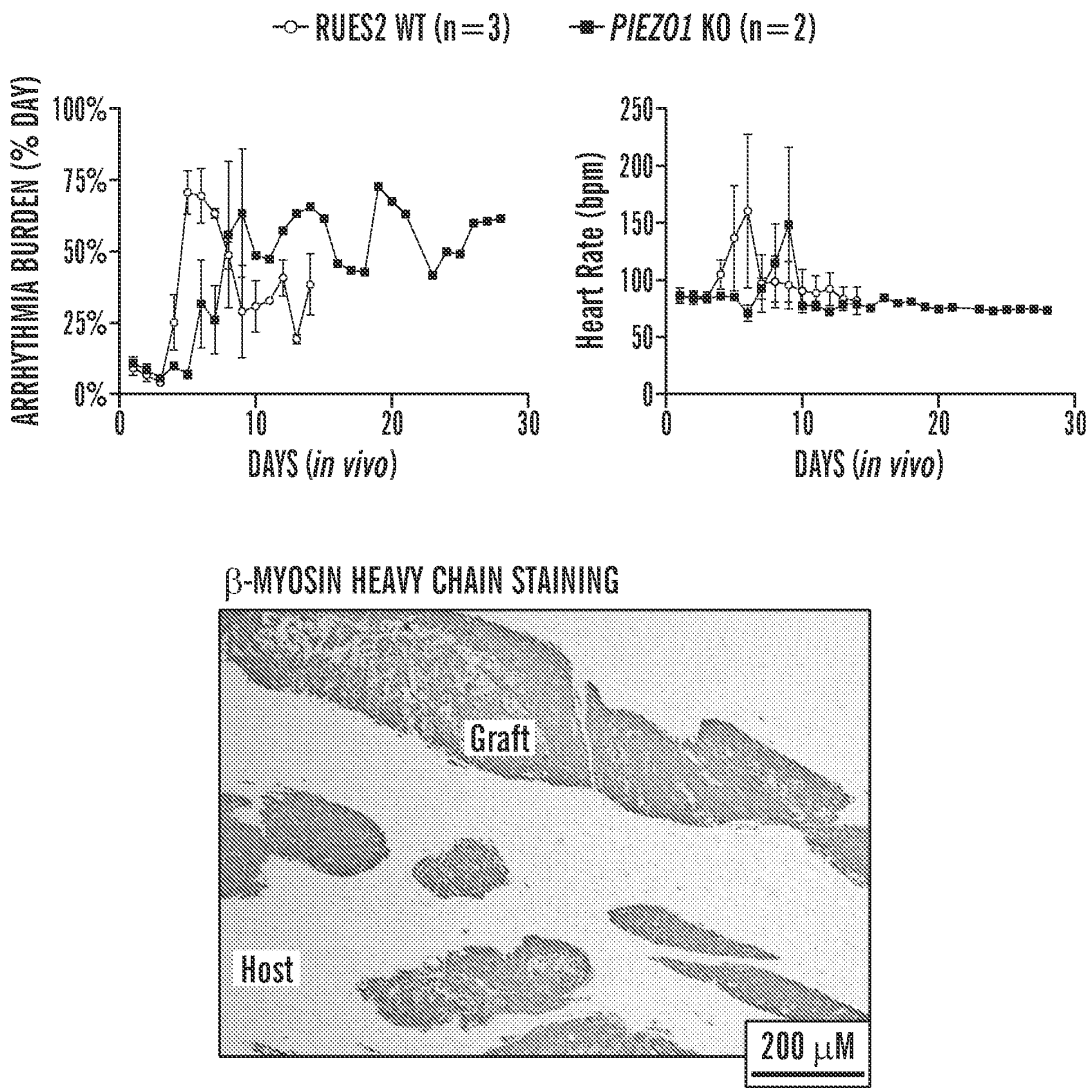


FIG. 15F

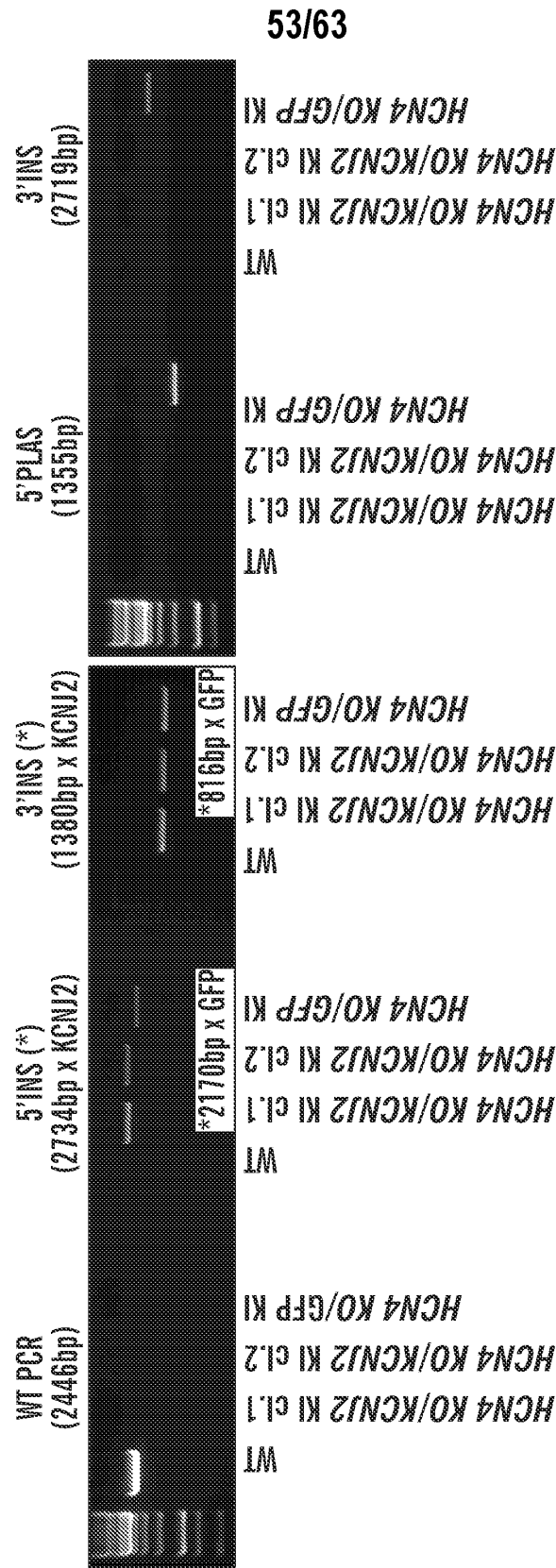


FIG. 16A

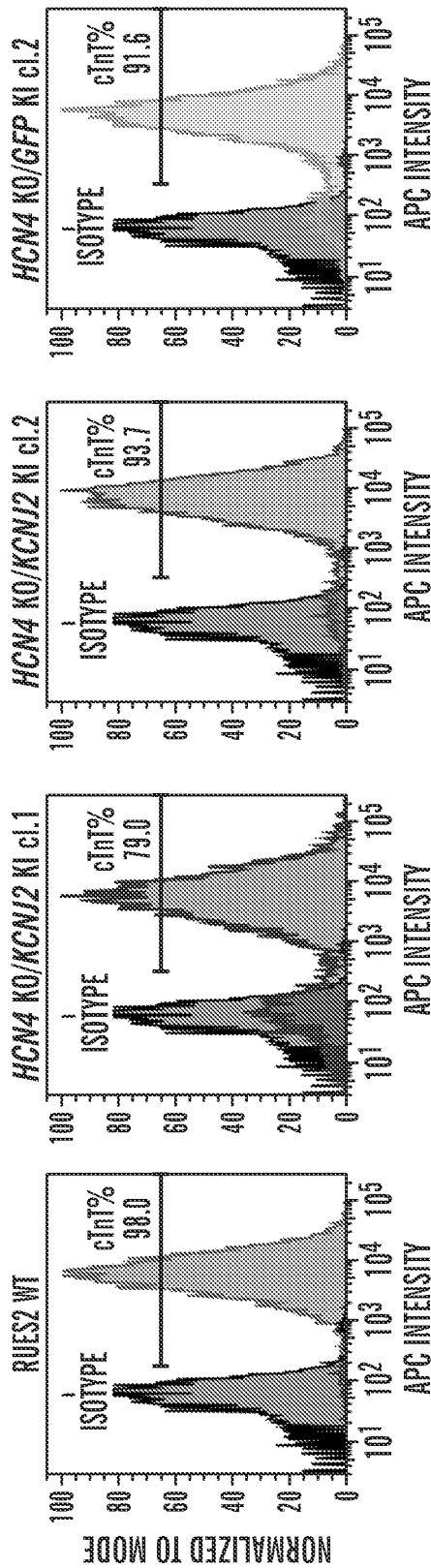


FIG. 16B

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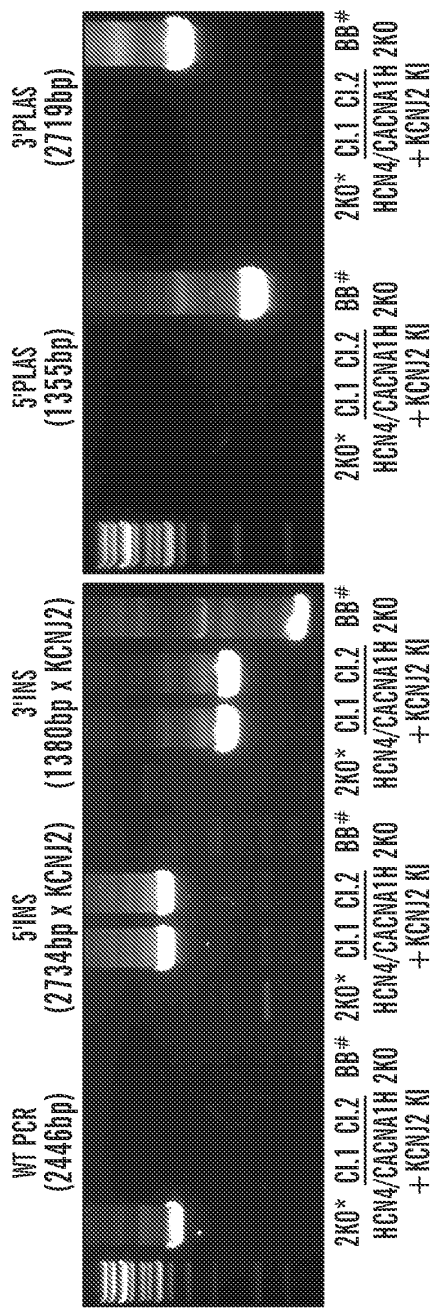


FIG. 16C

2KO* = HCN4/CACNA1H 2KO cl. 1
BB# = BACKBONE PLASMID

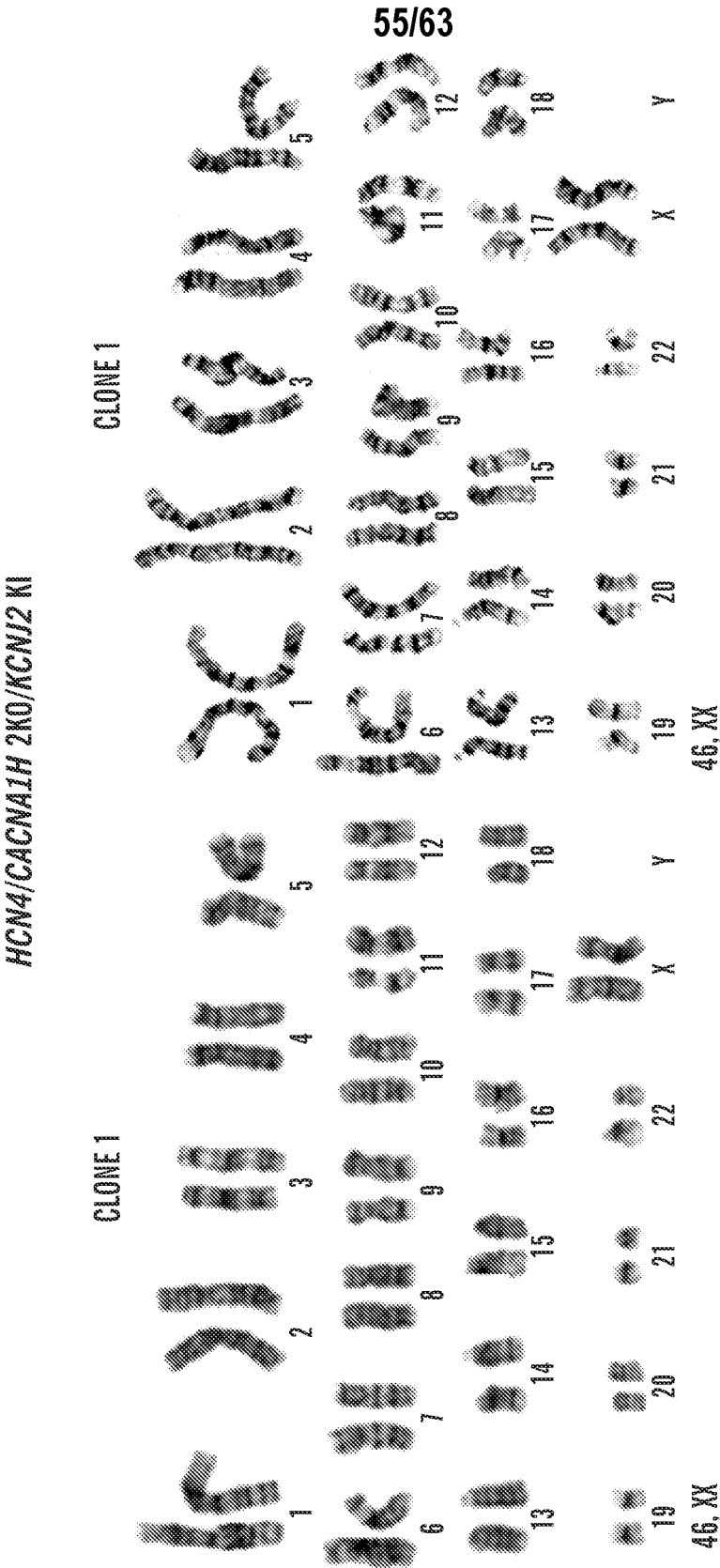


FIG. 16D

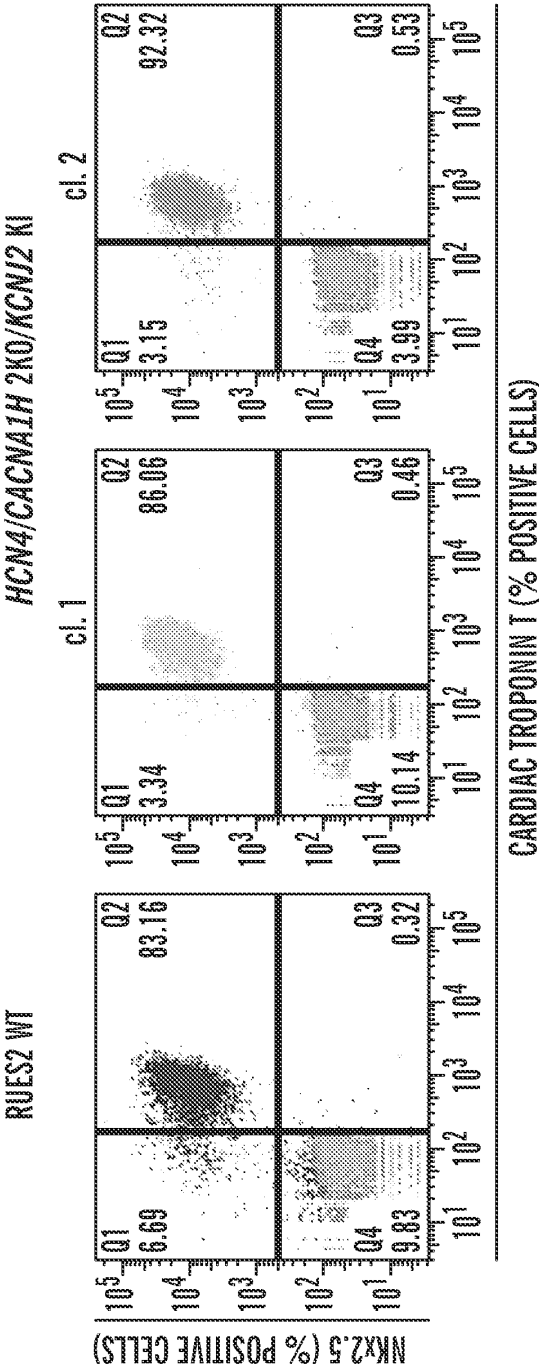


FIG. 16E

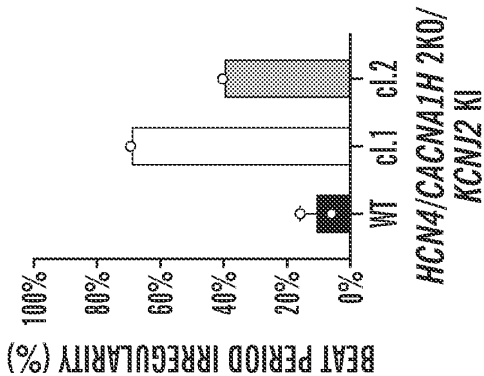
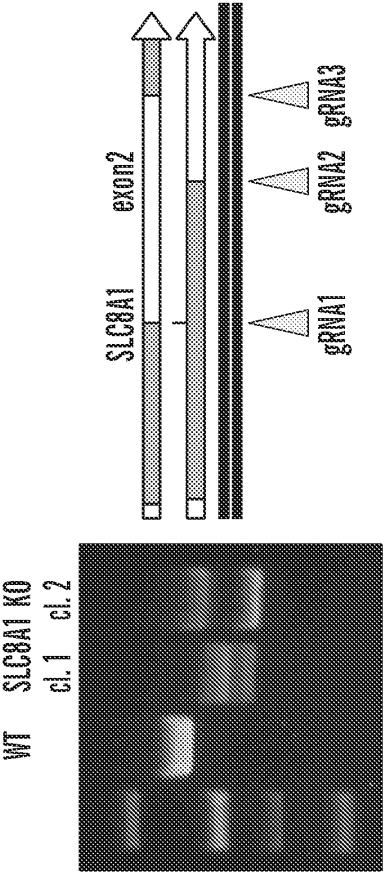
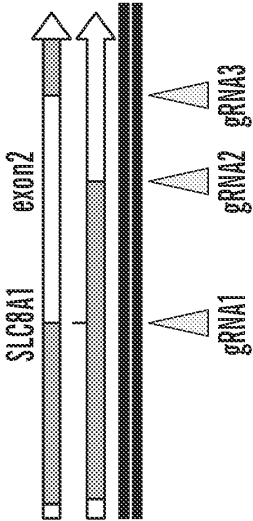


FIG. 16G

FIG. 16F



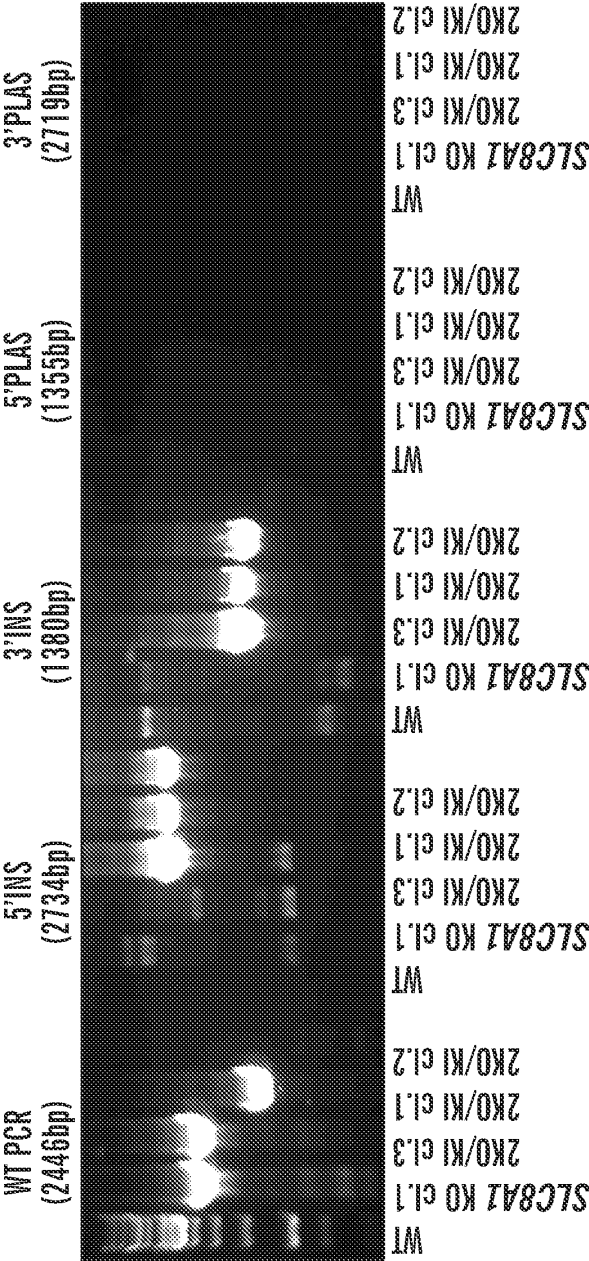


FIG. 16H

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FIG. 17A

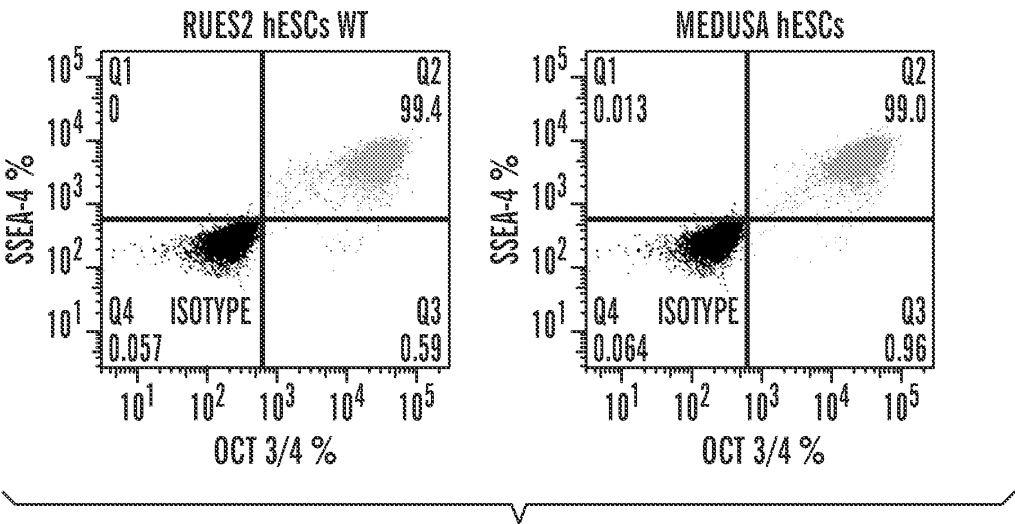


FIG. 17B

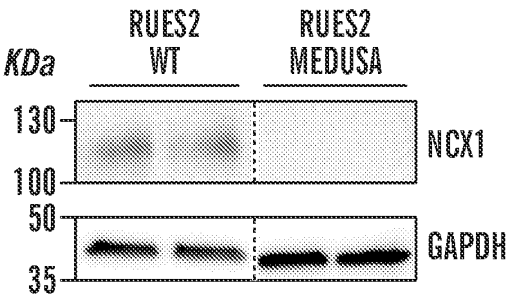


FIG. 17C

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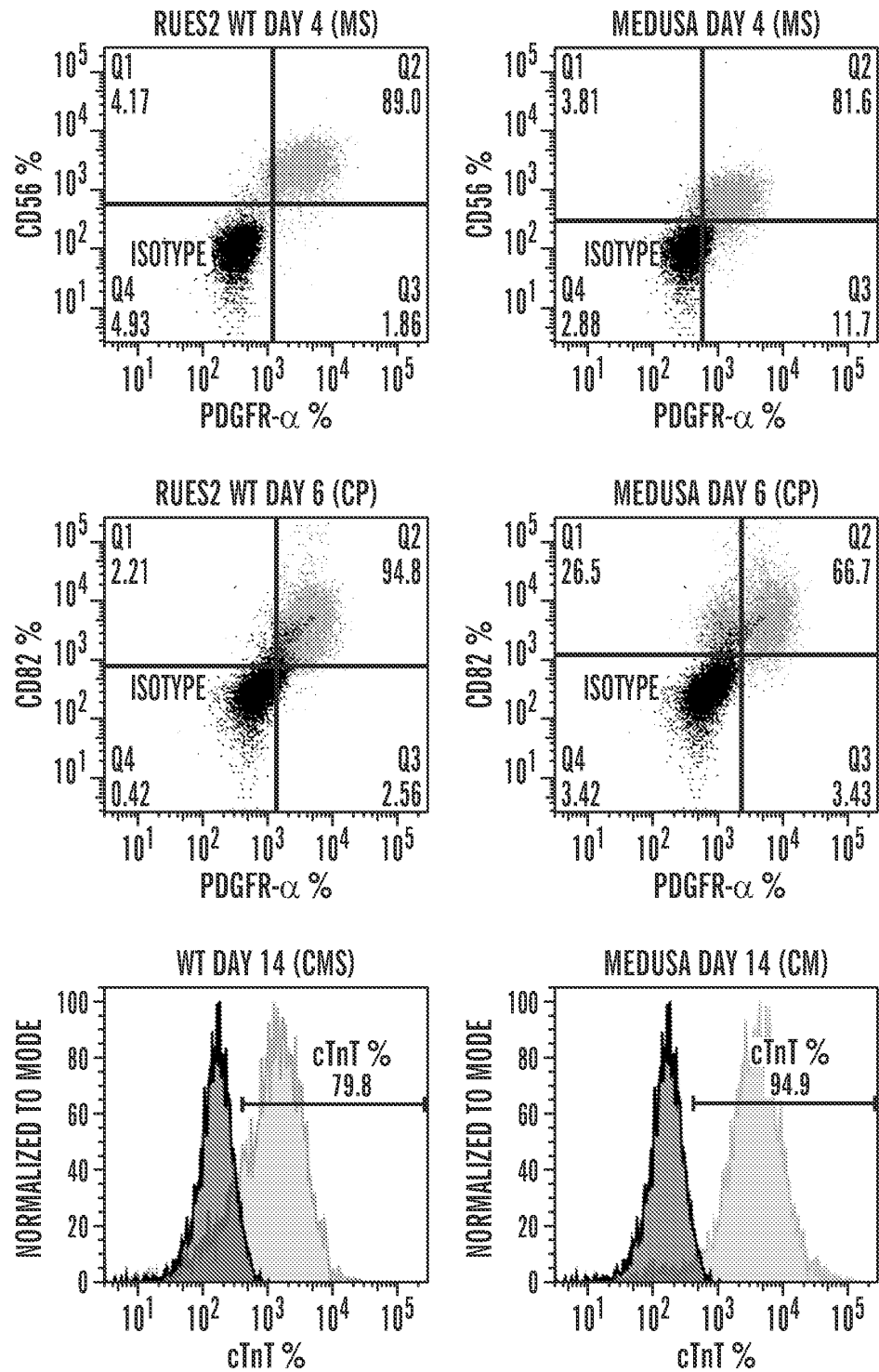


FIG. 17D

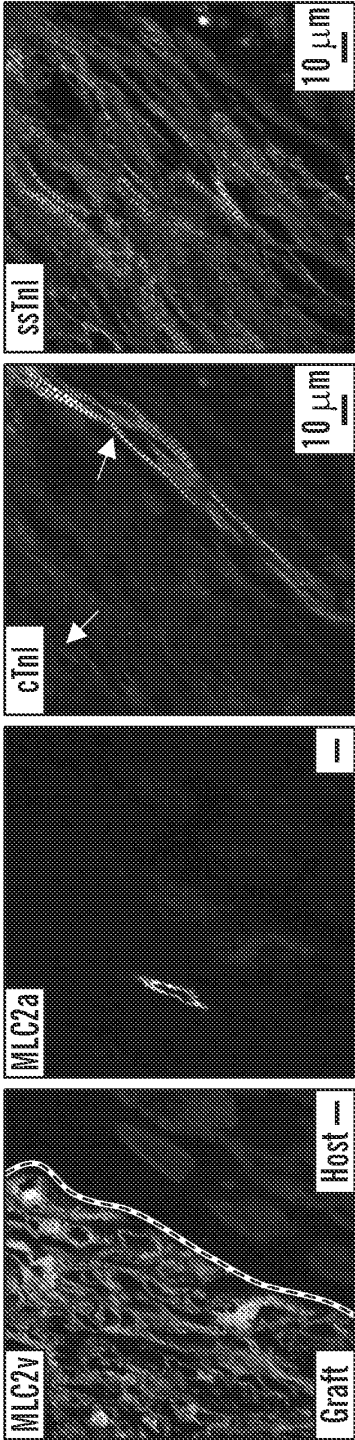
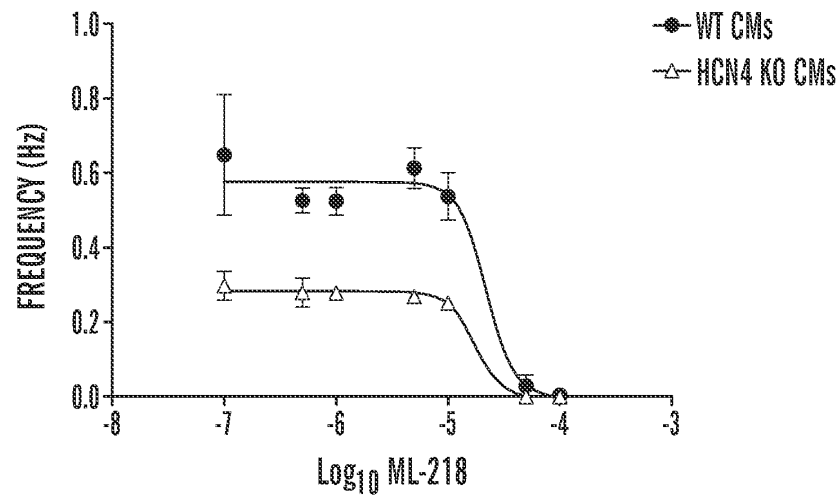


FIG. 17E

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	WT CMs	HCN4 KO CMs
log (inhibitor) vs. response – Variable slope (four parameters)		
Best-fit Values		
Bottom	-0.0007886	-0.003166
Top	0.5768	0.2820
LogIC50	-4.661	-4.760
HillSlope	-3.510	-3.641
IC50	2.183e-005	1.739e-005
Span	0.5776	0.2852
Std. Error		
Bottom	0.08356	0.02175
Top	0.03717	0.01022
LogIC50	0.2906	0.2191
HillSlope	2.898	3.154
Span	0.09293	0.02505

FIG. 18