



Figure S1: Sequence alignments of murine essential and regulatory light chains with the ventricular human cardiac isoforms. A) The two murine essential light chains present in our M2 $\beta$ -S1 construct, myosin light chain 1/3 (UniProt - P05977) and myosin light chain 4 (UniProt-P09541), were 75% and 79% identical and 83% and 91% similar, respectively, to the human myosin light chain 3 (P08590). B) The murine regulatory light chain present in our M2- $\beta$ S1 construct, myosin regulatory light chain 2 (UniProt - P97457), is 74% identical and 87% similar to the human cardiac muscle regulatory light chain 2 (P10916). The sequences were aligned using Jalview with the similarity of each residue colored based on BLOSUM62 score.