fractures confirmed that β-adrenergic stimulation by isoproterenol decreased the B56α content of the myofilament fraction in the absence of significant changes in the myosin phosphatase target subunit isoforms 1 and 2 (MYPT1 and MYPT2). Furthermore, immunolabelling and confocal microscopy revealed the spatial redistribution of these proteins, with a loss of B56α from Z-disc and M-band regions but increased association of MYPT1/2 with A-band regions of the sarcomere, following β-adrenergic stimulation.

**Conclusion**

We present the first comprehensive proteomic dataset of skinned cardiomyocytes and demonstrate the potential of proteomics to unravel dynamic changes in protein composition that may contribute to the neurohormonal regulation of myofilament contraction.