Shear Stress Regulates TRPV4 Channel Clustering and Translocation from Adherens Junctions to the Basal Membrane

Sara Baratchi¹, Markus Knoerzer², Khashayar Khoshmanesh², Arnan Mitchell²,

Peter McIntyre¹

¹ School of School of Health and Biomedical Sciences, RMIT University, VIC 3083, Australia

² School of Engineering, RMIT University, VIC 3001, Australia

Corresponding author:

Dr. Sara Baratchi, School of Health and Biomedical Sciences, RMIT University, Melbourne,

Australia

Email: sara.baratchi@rmit.edu.au

Supplementary 1



Supplementary 1 Stimulation of HUVECs with a low shear stress of 1 dyn/cm² did not change the spatial distribution of TRPV4. Peaks of Ripley's K-function plots were analyzed for the maximum values of L(r)-r (A), r_{max} (B) and % of molecules in cluster (C) for multiple cells.

Supplementary 2



Supplementary 2 Cell surface biotinylation assay showing that activation of α 5 β 1 integrin with anti- β 1 integrin antibody (12G10) increases the cell surface expression of TRPV4 in HUVECs.