

Supplementary movie 1

cAMP measurements in adult mouse ventricular cardiomyocytes

Representative movie (out of 3 independent experiments) of ventricular cardiomyocytes isolated from CAG-Epac1-camps mice imaged on an epifluorescence microscope with a CFP (channel 1) and a YFP (channel 2) emission filters. The movie shows baseline CFP/YFP fluorescence of the Epac1-camps sensor before and after medium exchange from isotonic (Baseline) to hypotonic (Swelling).

Supplementary movie 2

Nanobody 37 recruitment to the basolateral membrane of β 2-AR transfected HEK293 cells upon stimulation with isoproterenol

Representative TIRF-microscopy movie (out of 3 independent experiments) of HEK293AD cells transfected with Nb37-eYFP (channel 1) and Snap- β 2-AR (channel 2) upon consecutive stimulation with 3 nM and 10 μ M isoproterenol, showing a recruitment of the nanobody to the basolateral cell membrane upon agonist addition.