

Supplementary Figure Legends

Figure 1. Upregulated CaSR in pulmonary arteries from IPAH patients.

A. Immunohistochemistry data showing CaSR expression level (green fluorescence intensity) in pulmonary arteries of normal subjects and IPAH patients. The lung tissue sections were stained with antibodies against CaSR (green) and smooth muscle α -actin (SM- α -Actin, red) and with DAPI (blue). The overlay images are shown in the bottom. B. Summarized data (means \pm SE, n=3 for each group) showing CaSR expression level (green fluorescence intensity) in pulmonary arteries of normal subjects (Norm) and IPAH patients. ** P <0.01 vs. Normal.

Figure 2. Extracellular Ca^{2+} -induced increase $[\text{Ca}^{2+}]_{\text{cyt}}$ in IPAH-PASMCs is not due to Ca^{2+} leakage.

A. Representative traces showing change in resting $[\text{Ca}^{2+}]_{\text{cyt}}$ before and during application of Ca^{2+} -free solution in normal and IPAH PASMC. Summarized data (right panel, n=96-370 cells) showing the resting $[\text{Ca}^{2+}]_{\text{cyt}}$ in normal and IPAH PASMC superfused with 2.2 mM Ca^{2+} -containing solution (black bars) or Ca^{2+} -free solution (grey bars). ** P <0.001 vs. normal PASMC. B. Representative images (left panels) of trypan (TB) blue staining (0.4%, 1 min) before (-) and during (+) treatment with 10 μM ionomycin for 10 min in normal (upper panels) and IPAH (lower panels) PASMC. Summarized data (right panel) showing no correlation between the extracellular Ca^{2+} -induced increase in $[\text{Ca}^{2+}]_{\text{cyt}}$ and the Ca^{2+} leakage through the plasma membrane. C. Representative images showing $[\text{Ca}^{2+}]_{\text{cyt}}$ (or Fura-2 fluorescence intensity) in normal (left panels) and IPAH (right panels) PASMC in the absence and presence of 10 μM CPA, an inhibitor of Ca^{2+} -ATPase in the SR. The cells were loaded with the membrane-permeable fura-2/AM (4 μM , upper panels) or the membrane-impermeable fura-2 (4 and 40 μM , middle and lower panels). Data were obtained from 21 to 64 cells.