The pH-Sensing GPCR GPR68 Signals In cAMP/PKA/EPAC1-Independent Manner

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RESULTS
Activation of GPR68 in acidic conditions showed no change in protein levels of PKAThr197, PKATotal, EPAC1, or PKAThr197 to PKATotal ratio (see right side), when compared to normal biological pH after 5 hours of exposure. N=4

CONCLUSION
- GPR68 does not signal through cAMP/PKA/EPAC1 in response to acidic conditions in VSM cells
  - May still use this pathway under other conditions, such as hypoxia
- GPR68 may signal through Gq and/or G12/13 in acidic conditions

EXTRA FIGURES / GRAPHS
LEFT: Real time PCR data showing increased transcription of GPR68 under acidic conditions in VSM cells. RIGHT: Preliminary data showing decreases in cAMP in acidic conditions for WT cells, but not in KO cells.

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Future studies will explore the Gαq signaling cascade as the potential pathway for GPR68 signalling.