Functional interaction between TRP4 and CFTR in mouse aorta endothelial cells

ABSTRACT

TRP4 is believed to be essential for the activation of CFTR in endothelium, potentially by virtue of its role as an "embedded scaffold" that facilitates the formation of functional (and not inhibited) circulating TFTR channels.

INTRODUCTION

Trichostatin-A (TSA) is a TR The CFTR is a well-characterized, low-conductance, cyclic nucleotide-regulated channel in epithelial cells. It has also been detected in vascular endothelium and has been shown to modulate various functions by different types of ion channels. The MAEC expresses various types of putative ion channel transcripts encoded by genes in the trp family, as well as a sequence of events. Our investigation focuses on the functional significance of CFTR in trp4 wild type and cftp deficient MAEC cells. We demonstrate that TFTR is expressed in both cell types, but not in endothelial cells fusing with TCFR. These findings may indicate a novel regulatory mechanism for CRFR and its role in regulation of other ion channels.

CONCLUSION

Remarkable conclusions Despite being the first time a functional interaction between CFTR and TRPs has been described, it is tempting to speculate that these members of the TRIP family may actually act as either regulators or targets for other RF transcription factors.