RABL6A, a Novel Critical Regulator of Akt-mTOR Signaling in Pancreatic Neuroendocrine Tumor Cells

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Background

Introduction

Our goal is to better understand key pathways underlying pancreatic neuroendocrine tumors (PNET) pathogenesis and thereby identify novel PNET biomarkers and drug targets to improve patient diagnosis and treatment.

Hypothesis

RABL6A promotes PNET cell proliferation and survival through activation of AKT and downstream mTOR signaling

Results

Factors regulating AKT phosphorylation

Nek2 kinase overexpression fails to rescue the effects of RABL6A loss on AKT phosphorylation and cell proliferation in PNET cells

mTORC2 complexes remain intact and active in RABL6A-depleted PNET cells

Future Directions

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Conclusions

RABL6A is a novel regulator of AKT phosphorylation and is required for its activation.

RABL6A controls multiple, clinically relevant cancer pathways essential for PNET cell proliferation and survival.

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