

P006 Using RNAi to determine the role of class II PI 3-kinases.

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The 3 mammalian class II PI3K isoforms consist of a single subunit, larger in size than either class I or class III catalytic subunits, and are characterised by the presence of C-terminal PX and C2 domains. Their cellular function is unclear. The class II PI3K isoforms, PI3K-C2 α and PI3K-C2 β , are activated by, and in some cases associated with, diverse receptors, including epidermal growth factor receptor (EGFR) and insulin receptor, suggesting a possible role in either receptor-mediated signalling or trafficking. In support of a role in receptor trafficking, PI3K-C2 α , has been shown to be associated with clathrin-coated vesicles and to be activated by clathrin *in vitro*, and PI3K-C2 β has been localised to endosome-like structures. Using RNAi approaches we are investigating the role of class II PI3Ks in growth factor-mediated signal transduction and receptor trafficking. Using siRNAs we have knocked down PI3K-C2 α and PI3K-C2 β in HeLa cells and are currently investigating the effect this has on transferrin and EGFR trafficking and on EGFR signalling.