

Task 4:

EEA1 is a RAB5 effector. Model the binding of the EEA1 C-terminal (aa 1270-1350) to RAB5, In the presence/absence of ATP. Do you see difference in binding?

The following papers can be useful:

1: *Callaghan J, Simonsen A, Gaullier JM, Toh BH, Stenmark H. The endosome fusion regulator early-endosomal autoantigen 1 (EEA1) is a dimer. Biochem J. 1999 Mar 1;338 (Pt 2)(Pt 2):539-43. PMID: 10024533.*

2: *Simonsen A, Lippé R, Christoforidis S, Gaullier JM, Brech A, Callaghan J, Toh BH, Murphy C, Zerial M, Stenmark H. EEA1 links PI(3)K function to Rab5 regulation of endosome fusion. Nature. 1998 Jul 30;394(6692):494-8. PMID: 9697774.*

EEA1 (1270-1350)

QTDDL RGEI AVL EATVQNNQDERRALLERCLKGEGEIEKLQTKVLELQRKLDNTTAAVQELGRENQSLQIK
HTQALNRKWA

RAB5A

MASRGATRPNGPNTGNKICQFKLVLLGESAVGKSSVLRFVKGQFHEFQESTIGAAFLTQ
TVCLDDTTVKFEIWDTAGQERYHSLAPMYRGAQAIVVYDITNEESFARAKNWWKELQR
QASPNIVIALSGNKADLANKRAVDFQEAQSYADDNSLLFMETSAKTS MNVNEIFMAIAKK
LPKNEPQNPGANSARGRGVDLTEPTQPTRNQCCSN