

Forces acting on nascent polypeptide chains during co-translational protein translocation and folding

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Abstract

We are using SecM-derived translational arrest peptides to measure forces acting on the nascent chain during co-translational protein translocation and folding *in vivo*. The technique makes possible detailed studies of translocation and folding of both membrane proteins, secretory proteins, and cytoplasmic proteins.

Ismail, N., Hedman, R., Schiller, N., and von Heijne, G. A bi-phasic pulling force acts on transmembrane helices during translocon-mediated membrane integration. *Nature Struct. Molec. Biol* 19, 1018-1023.

Ismail, N., Hedman, R., Lindén, M., and von Heijne, G. (2015) Charge-driven dynamics of nascent chain movement through the SecYEG translocon. *Nature Struct Molec Biol* 22, 145-149.