



PubMed Nucleotide Protein Genome Structure PopSet Taxonomy OMIM Books
 Search PubMed for

[Limits](#) [Preview/Index](#) [History](#) [Clipboard](#) [Details](#)

Entrez PubMed

1: Mol Biol Rep 1985 Apr;10(3):129-36

[Related Articles, Books, LinkOut](#)

Interaction in vitro of the neurofilament triplet proteins from porcine spinal cord with natural RNA and DNA.

PubMed Services

Traub P, Vorgias CE, Nelson WJ.

Related Resources

Neurofilaments were isolated from porcine spinal cord and separated into their subunit proteins (68 Kd NFP, 145 Kd NFP, 200 Kd NFP) by ion exchange chromatography on DEAE-cellulose in 6 M urea. The individual proteins were reacted with total rRNA from Ehrlich ascites tumor cells and the reaction products analysed by sucrose gradient centrifugation at low ionic strength and in the presence of EDTA. All three proteins interacted with rRNA with a preference for 18S rRNA. Competition experiments with native and heat-denatured calf thymus DNA showed that the affinities of the 68 Kd and 145 Kd NFPs were considerably higher for denatured DNA than for rRNA and that native DNA was only a weak competitor. The binding of the 200 Kd NFP to rRNA was unaffected by native and by denatured DNA. When denatured DNA was reacted with a mixture of the 68 Kd and 145 Kd NFPs, the two proteins interacted independently with the nucleic acid, giving rise to two different populations of deoxyribonucleoprotein particles. This segregation is the result of the cooperative interaction of the neurofilament proteins with single-stranded DNA. It could not be observed with rRNA or bacteriophage MS2 RNA. The results clearly show that the 68 Kd and 145 Kd NFPs are single-stranded RNA- and DNA-binding proteins, whereas the 200 Kd NFP seems to be only a single-stranded RNA-binding protein.

PMID: 2412102 [PubMed - indexed for MEDLINE]

Display	Abstract	↕	Sort	↕	Save	Text	Clip Add	Order
---------	----------	---	------	---	------	------	----------	-------

[Write to the Help Desk](#)
[NCBI](#) | [NLM](#) | [NIH](#)
[Department of Health & Human Services](#)
[Freedom of Information Act](#) | [Disclaimer](#)

i686-pc-linux-gnu Jul 16 2002 16:34:53