ABSTRACT

The oligomerisation of the P-element transposase of *Drosophila melanogaster* (dmTNP) might be important for its catalytic activity in transposition. Since THAP9 of *Homo sapiens* (hTHAP9) is homologous to Drosophila P-element transposase, it was hypothesised that their mechanisms of action are also similar. To explore this hypothesis and explore the possibility of THAP9 oligomer formation, an *in-silico* approach was previously used to predict the oligomerization domains of dmTNP and hTHAP9. Based on these predictions, the truncated versions were cloned in pGEX-6P-1, expressed and purified using Ni-NTA chromatography. *In-vitro* oligomerization was investigated by means of Native-PAGE and EGS (crosslinking) assay. Preliminary experiments demonstrate that dmTNP forms tetramers. In order to probe the likelihood of hetero-oligomerization of hTHAP9 with other interaction partners, we have attempted to clone and express hTHAP10 and HCF-1 in human cells.