

## Anticancer treatment using a novel Cell-Penetrating Peptide

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One of the major challenges in human therapy is to develop delivery systems that are convenient and effective for tackling problems in disease treatments. However, to exert their desired therapeutic effects, recombinant bioactive macromolecules very often need to be delivered to the cytoplasm. The use of cell-penetrating peptides (CPP) can overcome this problem and mediate the transduction of therapeutic cargos intracellularly. We have recently isolated and optimized a new CPP named MD11 which possesses the capability to directly transduce recombinant biomedicines through the plasma membrane. Herein, we present the biochemical properties of MD11 and its use for the direct transfer of biomedicines including the f subunit of the eukaryotic initiation factor 3 (eIF3f) for treating cancer cells. We identified four cell lines responsive to eIF3f-treatment and we evaluated the antitumor properties of the recombinant proteins using dose- and time- dependent studies. Our results demonstrate that this protein delivery approach represents an innovative and powerful strategy for cancer treatment.