

Title (en)

CAP-BINDING DOMAIN OF HUMAN EUKARYOTIC PROTEIN SYNTHESIS INITIATION FACTOR eIF-4E AND THE USE THEREOF

Title (de)

CAP-BINDENDE DOMAENE DES MENSCHLICHEN EUKARYOTISCHEN PROTEINSYNTHESE-INITIATIONSFAKTORS EIF-4E UND IHRE ANWENDUNG

Title (fr)

DOMAINE DE FIXATION DE COIFFE DU FACTEUR D'INITIATION eIF-4E DE SYNTHÈSE PROTÉIQUE EUKARYOTE HUMAINE

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Application

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Abstract (en)

[origin: WO9808865A1] Binding of eIF-4E to the 5'm<7>G cap structure of eukaryotic mRNA signals the initiation of protein synthesis. In the present invention, the binding site cap-binding domain of eIF-4E was identified as the region containing the sequence Trp<113> to Arg<122>. Thus, in a first preferred embodiment the present invention provides a truncated peptide of the cap binding protein consisting essentially of the mRNA cap-binding domain. Specifically, the invention concerns eIF-4E cap binding peptide and its variants. In additional preferred embodiments, the invention provides an isolated nucleic acid molecule which encodes a truncated peptide of the eIF-4E protein consisting essentially of the mRNA cap-binding domain of eIF-4E; a recombinant vector and host cell comprising the above-described nucleic acid molecule; and a recombinant peptide produced thereby. The invention further provides the truncated or recombinant peptides immobilized on a solid support, a resin comprising the truncated or recombinant peptides immobilized on a solid support, methods and kits for isolating a capped mRNA molecule, and methods and kits for producing a full-length cDNA molecule.

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