Title (en)

HUMAN CRABP-I AND CRABP-II.

Title (de)

MENSCHLISCHES CRABP-I UND CRABP-II.

Title (fr)

CRABP-I ET CRABP-II HUMAINES.

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Application

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Abstract (en)

[origin: WO9322331A1] The sequences encoding two isoforms of human cellular retinoic acid binding proteins, CRABP-I and CRABP-II, have been cloned and sequenced and are set forth with their corresponding amino acid sequences in SEQ ID NOS. 1-4. The indentification of human CRABP nucleic and amino acid sequences provides the basis for the construction of recombinant human CRABP vectors and expression constructs. Human CRABP can also be synthesized or produced ex vivo, e.g. in bacterial or other production systems. Ligand binding assays, including recombinant and chimeric receptor reporter assays, and direct and competition hybridization assays employing the human CRABP sequences herein described can be used to test drugs for retinoic induction and tissue specificity for pathologies in which retinoids are implicated. Immunoassays utilizing antibodies or binding fragments produced to human CRABP can also be used to test patient tissues for the presence and levels of CRABP for diagnosis and to monitor treatment. The indentification of the nucleic and amino acids sequences for human CRABP-I and CRABP-II also contributes to the elucidation of the function and interaction of the retinoid-binding proteins. The CRABP-II gene, isolated from a human placenta genomic library, spans 6 kilobases and includes 4 exons. One major transcription initiation site was mapped to an A residue 137 nucleotides upstream of the ATG initiation codon. CRABP-II mRNA was rapidly induced within 2-6 hours in culture by retinoic acid, primarily due to an increased rate of transcription which required on-going synthesis. The human CRABP-II gene is thus apparently transcriptionally regulated by a newly synthesized regulator protein. Once the CRABP-II is produced, message stabilization may provide means by which elevated CRABP-II in mRNA is maintained.

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