Assignment of the human organic anion transporting polypeptide (OATP) gene to chromosome 12p12 by fluorescence in situ hybridization

JournalArticle (Originalarbeit in einer wissenschaftlichen Zeitschrift)

ID 167549
Author(s) Kullak-Ublick, G A; Beuers, U; Meier, P J; Domdey, H; Paumgartner, G
Author(s) at UniBasel Meier-Abt, Peter J. ;
Year 1996
Title Assignment of the human organic anion transporting polypeptide (OATP) gene to chromosome 12p12 by fluorescence in situ hybridization
Journal Journal of hepatology
Volume 25
Number 6
Pages / **Article-Number** 985-7
Keywords bile acids, chromosome mapping, genomic cloning, organic anion transport protein
BACKGROUND/AIMS: The organic anion transporting polypeptide (OATP) of human liver mediates the basolateral hepatocellular uptake of numerous cholephilic anions and steroidal compounds. The aim of this study was to clone the human OATP gene and to map its chromosomal localization by fluorescence in situ hybridization. METHODS: A polymerase chain reaction-amplified fragment of the human OATP gene was used to isolate a genomic OATP clone from a P1-derived artificial chromosome human genomic library. Human metaphase chromosomes were hybridized with digoxigenin-labeled DNA from the genomic OATP clone and incubated in fluoresceinated antidigoxigenin antibodies for in situ detection of specific hybridization signals. RESULTS: Sequence analysis revealed that the isolated P1-derived artificial chromosome clone contained a large portion of the human OATP gene. Fluorescence in situ hybridization of human chromosomes with the genomic OATP clone resulted in the specific labeling of the OATP gene on the short arm of chromosome 12 at band 12p12. CONCLUSIONS: Mapping of a genomic OATP clone to chromosome 12p12 represents a first step towards the molecular characterization of the human OATP gene. While no liver disease has so far been associated with cytogenetic abnormalities of the short arm of chromosome 12, the genomic OATP sequence provides the basis for studies on gene structure and on the tissue-specific regulation of OATP gene expression.

Publisher Elsevier
ISSN/ISBN 0168-8278
edoc-URL http://edoc.unibas.ch/dok/A5261723
Full Text on edoc No;
Digital Object Identifier DOI 10.1016/S0168-8278(96)80307-2
PubMed ID http://www.ncbi.nlm.nih.gov/pubmed/9007731
ISI-Number WOS:A1996WB90600028
Document type (ISI) Journal Article