

视黄醇结合蛋白及其基因的分子生物学Molecular Biology of the Retinol-binding Proteins and Their Genes

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摘要

视黄醇结合蛋白(RBP)是一类维生素A(VitA)的运载蛋白,参与血清和细胞内视黄醇/视黄酸的转运,是疏水小分子结合蛋白家族的成员。这类RBP主要在肝脏中合成并释放入血液进而进入各种组织。血清RBP通过与视黄醇、前白蛋白及细胞表面受体相互作用,在VitA的储存、代谢、转运到周围靶器官中具有重要功能;细胞RBP则主要在细胞内发挥类似作用。本文介绍了视黄醇结合蛋白的作用机理、组织定位和发育性表达,还介绍了视黄醇结合蛋白基因的结构、染色体定位以及与动物繁殖性能的关系。Abstract: Retinol-binding proteins (RBPs) are a kind of circulating carrier proteins for serum and cellular retinol and retinol acid, which are lipid-soluble vitamins, and are members of hydrophobic binding protein family. Serum RBPs were synthesized primarily in liver, then was released into blood streams, and then to various tissues. Under the interaction with substances such as retinol, pre-albumin and the receptors of cellular surface, they play important roles in storage, metabolism of VitA and transport of VitA to the target cells. Cellular RBPs play the similar function as serum RBPs in intracell. This review introduces action mechanism, tissue localization and developmental expression of retinol-binding proteins. This review also introduces the structure, chromosome mapping and their relationships with reproductive performance of retinol-binding protein genes.

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