

种新的蛋白酪氨酸磷酸酶基因的克隆、定位和组织表达谱研究 Cloning, Chromosomal Assignment and Tissue Expression of a Novel Human Protein Tyrosine Phosphatase (PTP- TD14) Gene

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摘要 从人胎肝cDNA文库分离出一长度为5248bp的cDNA克隆, 该基因包含26个外显子和25个内含子, 染色体定位于在某些肿瘤细胞中易缺失的3p21. 1-21. 33. 其可读框编码1636个氨基酸, 该蛋白属于蛋白酪氨酸磷酸酶(PTP)家族, 其C端有一个典型的PTP结构域, N端含有约800氨基酸残基的BRO1样结构域及随后2个可能的SH3结构域结合位点, 在这两个结构域之间及C末端还各有一个脯氨酸富集区. Northern杂交和点杂交分析显示, 该基因以大约5. 4kb的单一转录物广泛表达于人体各种组织, 而且在人部分肿瘤细胞中高表达. 结果提示, 人源PTP-TD14是一个新的蛋白酪氨酸磷酸酶.

Abstract: A human cDNA of 5248bp encoding a novel protein tyrosine phosphatase PTP-TD14(1636aa) has been isolated from fetal liver. The gene is located at chromosome 3p21.3, an area frequently deleted in many types of cancer, and composed of at least 26 exons and 25 introns. The phosphatase has unique features in its domain structure: a tyrosine phosphatase domain, a C-terminal PEST motif, two SH3-binding motifs, two proline-rich region and an N-terminal domain similar to yeast BRO1 (a yeast protein that is involved in the mitogen-activated protein kinase signaling pathway). Northern blot and dot blot hybridizations indicate that it is expressed ubiquitously in human 50 tissues and 7 cancer cell lines. Thus, it is a novel protein tyrosine phosphatase gene located on 3p21.3.

关键词 [蛋白酪氨酸磷酸酶](#) [cDNA克隆](#) [人染色体3p21](#) [PTP结构域](#) [BRO1样结构域](#) [组织表达谱](#) **Key words** [protein tyrosine phosphatase](#) [cDNA cloning](#) [human chromosome 3p21](#) [PTP domain](#) [BRO1 like domain](#) [tissue transcription profile](#)

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