

Title (en)  
METHODS OF DIAGNOSING AND TREATING COLORECTAL CANCER

Title (de)  
METHODEN ZUR DIAGNOSEUND BEHANDLUNG VON KOLOREKTALEM KREBS

Title (fr)  
METHODES DE DIAGNOSTIC ET DE TRAITEMENT DU CANCER COLORECTAL

Publication  
**EP 1492884 A2 20050105 (EN)**

Application  
**EP 03715738 A 20030402**

Priority  
• JP 0304226 W 20030402  
• US 37060402 P 20020405

Abstract (en)  
[origin: WO03085134A2] The present application provides a human gene, HELAD1, whose expression is markedly elevated in a great majority of colorectal cancers as compared to corresponding non-cancerous tissues. Specifically, in investigating the mechanisms of colorectal carcinogenesis, genes regulated by adenomatous polyposis coli gene product (APC) were searched and the HELAD1 gene (helicase, APC down-regulated 1) was identified. A recombinant polypeptide representing the ATPases associated with cellular activities (AAA) domain of the HELAD1 product showed 3' to 5' helicase activity and exonuclease activity in vitro. HELAD1 was abundantly expressed in 16 of 20 colon cancers examined but hardly detectable in corresponding non-cancerous mucosae. Treatment of colon-cancer cells with antisense oligonucleotides suppressed its expression and induced apoptosis. This data demonstrates the importance of HELAD1 in colorectal carcinogenesis and its utility as a diagnostic marker of colorectal cancer. It further suggest that suppression of HELAD1 may be a promising therapeutic strategy in the treatment of colorectal cancer.

IPC 1-7  
**C12Q 1/68**; **C07K 14/47**; **A61K 39/00**

IPC 8 full level  
**G01N 33/50** (2006.01); **A61K 39/00** (2006.01); **A61P 35/00** (2006.01); **C07K 14/47** (2006.01); **C12N 9/90** (2006.01); **C12N 15/09** (2006.01); **C12Q 1/02** (2006.01); **C12Q 1/25** (2006.01); **C12Q 1/68** (2006.01); **G01N 33/15** (2006.01)

CPC (source: EP)  
**A61P 35/00** (2018.01); **C07K 14/47** (2013.01); **C12N 9/90** (2013.01); **C12Q 1/6809** (2013.01); **A61K 39/00** (2013.01); **C12Q 1/6886** (2013.01)

Designated contracting state (EPC)  
AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IT LI LU MC NL PT RO SE SI SK TR

DOCDB simple family (publication)  
**WO 03085134 A2 20031016**; **WO 03085134 A3 20040415**; AU 2003219563 A1 20031020; AU 2003219563 A8 20031020; EP 1492884 A2 20050105; JP 2005521421 A 20050721

DOCDB simple family (application)  
**JP 0304226 W 20030402**; AU 2003219563 A 20030402; EP 03715738 A 20030402; JP 2003582311 A 20030402