

Title (en)
METHODS AND COMPOSITIONS FOR DETECTING AND TREATING MYCOBACTERIAL INFECTIONS USING AN inhA GENE

Title (de)
METHODEN UND ZUSAMMENSETZUNG ZUR FESTSTELLUNG UND BEHANDLUNG VON MYKOBAKTERIELLEN INFEKTIONEN UNTER VERWENDUNG EINES inhA GENES

Title (fr)
PROCEDES ET COMPOSITIONS DE DETECTION ET DE TRAITEMENT DES INFECTIONS MYCOBACTERIENNES AU MOYEN D'UN GENE inhA

Publication
EP 0707496 A4 19971112 (EN)

Application
EP 94917378 A 19940512

Priority

- NZ 24762093 A 19930513
- US 9405344 W 19940512
- US 6240993 A 19930514

Abstract (en)
[origin: WO9426312A1] The embodiments of the invention are based upon the identification and characterization of genes that determine mycobacterial resistance to the antibiotic isoniazid (INH) and its analogs. These genes, termed inhA, encode a polypeptide, InhA, that is the target of action of mycobacteria for isoniazid. The sequences of wild-type INH-sensitive as well as allelic or mutant INH-resistant inhA genes and their operons are provided. Also provided are isolated InhA polypeptides of both the INH-resistant and INH-sensitive types.

IPC 1-7
A61K 48/00; C07H 21/00; C12P 19/34

IPC 8 full level
C12N 15/09 (2006.01); **A61K 8/00** (2006.01); **A61K 31/70** (2006.01); **A61K 38/00** (2006.01); **A61K 39/04** (2006.01); **A61P 31/04** (2006.01); **A61Q 17/00** (2006.01); **C07H 21/04** (2006.01); **C12N 1/21** (2006.01); **C12N 9/02** (2006.01); **C12N 9/08** (2006.01); **C12P 7/40** (2006.01); **C12Q 1/68** (2006.01)

CPC (source: EP)
A61K 39/04 (2013.01); **A61P 31/04** (2017.12); **C12N 9/001** (2013.01); **C12N 9/0065** (2013.01); **C12Q 1/689** (2013.01); **C12Q 2600/156** (2013.01)

Citation (search report)

- [PX] WO 9322454 A1 19931111 - PASTEUR INSTITUT [FR], et al
- [X] YING ZHANG ET AL.: "THE CATALASE-PEROXIDASE GENE AND ISONIAZID RESISTANCE OF MYCOBACTERIUM TUBERCULOSIS", NATURE, vol. 358, no. 6378, 13 August 1992 (1992-08-13), pages 591 - 593, XP000371735
- [X] Y. ZHANG ET AL.: "Transformation with katG restores isoniazid-sensitivity in Mycobacterium tuberculosis isolates resistant to a range of drug concentrations", MOLECULAR MICROBIOL., vol. 8, no. 3, March 1993 (1993-03-01), BLACKWELL, OXFORD, GB, pages 521 - 524, XP002039603
- [X] B. HEYM AND S.T. COLE: "Isolation and characterization of isoniazid-resistant mutants of Mycobacterium smegmatis and M. aurum", RESEARCH MICROBIOLOGY, vol. 143, no. 7, 1992, INSTITUT PASTEUR/ELSEVIER, PARIS, FR, pages 721 - 730, XP002039604
- [A] F.G. WINDER AND P.B. COLLINS: "Inhibition by Isoniazid of synthesis of mycolic acids in Mycobacterium tuberculosis", J. GEN. MICROBIOLOGY, vol. 63, no. 1, September 1970 (1970-09-01), CAMBRIDGE UNIVERSITY PRESS, LONDON, UK, pages 41 - 48, XP002039605
- [A] F.G. WINDER ET AL.: "Effects of ethionamide and isoxyl on mycolic acid synthesis in Mycobacterium tuberculosis BCG", J. GEN. MICROBIOLOGY, vol. 66, no. 3, June 1971 (1971-06-01), CAMBRIDGE UNIVERSITY PRESS, LONDON, UK, pages 379 - 380, XP002039606
- [A] A. QUÉMARD ET AL.: "Isoniazid inhibition of mycolic acid synthesis by cell extracts of sensitive and resistant strains of Mycobacterium aurum", ANTIMICROBIAL AGENTS AND CHEMOTHERAPY, vol. 35, no. 6, June 1991 (1991-06-01), AM. SOC. MICROBIOL., WASHINGTON, D.C., US, pages 1035 - 1039, XP002039607
- [T] A. DESSEN ET AL.: "Crystal structure and function of the isoniazid target of Mycobacterium tuberculosis", SCIENCE, vol. 267, 17 March 1995 (1995-03-17), AAAS, WASHINGTON, DC, US, pages 1638 - 1641, XP002039608
- [T] HEYM B ET AL.: "Implications of multidrug resistance for the future of short-course chemotherapy of tuberculosis: A molecular study.", LANCET (NORTH AMERICAN EDITION) 344 (8918). 1994. 293-298. ISSN: 0099-5355, 30 July 1994 (1994-07-30), XP002039609
- [T] QUEMARD, ANNAIEK ET AL.: "Enzymatic characterization of the target for isoniazid in Mycobacterium tuberculosis", BIOCHEMISTRY (1995), 34(26), 8235-41 CODEN: BICHAW; ISSN: 0006-2960, 1995, XP002039610
- See references of WO 9426312A1

Designated contracting state (EPC)
AT BE CH DE DK ES FR GB GR IE IT LI LU MC NL PT SE

DOCDB simple family (publication)
WO 9426312 A1 19941124; AU 690121 B2 19980423; AU 691219 A 19941212; CA 2162868 A1 19941124; EP 0707496 A1 19960424; EP 0707496 A4 19971112; JP H09501823 A 19970225

DOCDB simple family (application)
US 9405344 W 19940512; AU 691219 A 19940512; CA 2162868 A 19940512; EP 94917378 A 19940512; JP 52572394 A 19940512