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(54) Title: METHOD FOR INHIBITING ADENYLOSUCCINATE SYNTHETASE ACTIVITY METHYLTHIOADENOSINE PHOSPHORYLASE DEFICIENT CELLS																																																																																																																																																																																	
(57) Abstract																																																																																																																																																																																	
An <i>in vivo</i> method for depleting mammalian cells of adenosine 5'-monophosphate (AMP) useful in the treatment of certain cancers is provided. According to the method, a population of cells is obtained from a host and assayed for loss of methylthioadenosine phosphorylase (MTase) activity. MTase catabolizes methylthioadenosine to adenine for endogenous salvage incorporation into the intracellular AMP pool. The preferred method for assaying loss of MTase activity is a hybridization technique for detection of a homozygous loss of the gene which encodes with a therapeutically effective amount of an agent which inhibits the activity of adenylosuccinate synthetase, which converts inosine 5'-monophosphate to AMP, thus depleting the tumor cells of substrates for <i>de novo</i> AMP production. L-alanosine is the preferred ASS inhibitory agent for use in the method of the invention. The figure is a nucleotide sequence for genomic MTase (SEQ. ID. No. 1) wherein the exons are underlined.																																																																																																																																																																																	
<table border="0"> <tr> <td>1</td><td>TTTATACAGA</td><td>SCATGACAGT</td><td>GGGGTCTCA</td><td>CTAGGGTCTG</td><td>TCGCGACTC</td></tr> <tr> <td>51</td><td>TACATATTTS</td><td>AAACAGAGT</td><td>GGCTTCTCAG</td><td>AATCCAGTGA</td><td>ACCTAAATTT</td></tr> <tr> <td>101</td><td>TAGTTTAAAT</td><td>TGCTCACTGG</td><td>ACTGGGTTCT</td><td>AGGAGACCCC</td><td>CTGTGTTAGT</td></tr> <tr> <td>151</td><td>CTGTGGTCAT</td><td>TGCTAGGAGA</td><td>ATCACTTAAT</td><td>TTTTTCTAGA</td><td>CTCTAGGAGA</td></tr> <tr> <td>201</td><td>AAACAGTTGG</td><td>TGGTGTATCT</td><td>ATCAGGGTT</td><td>AACAATTTCT</td><td>TCCTGCTTC</td></tr> <tr> <td>251</td><td>CATAGGATG</td><td>GAAGCAGCA</td><td>CAGCATGATG</td><td>CTTGAAGG</td><td>TGAGTACCA</td></tr> <tr> <td>301</td><td>GGCAGCATC</td><td>TTGGCTTTGA</td><td>AGGAGAGGG</td><td>CTGTACACAT</td><td>GTCTAGTGA</td></tr> <tr> <td>351</td><td>CCACAGCTTG</td><td>TGGCTGCTGG</td><td>AGGAGAGAGA</td><td>TTCAGCCCCG</td><td>CGATATTGTC</td></tr> <tr> <td>401</td><td>ATTATTTATC</td><td>AGTTCACTGA</td><td>CAHHHHHHHH</td><td>HHHHHHHHHH</td><td>GAGGTGAGG</td></tr> <tr> <td>451</td><td>GTATCGATAA</td><td>GCCTTGTAAA</td><td>CAATTGTCTT</td><td>TAGCTTATCC</td><td>AGAGGAATTG</td></tr> <tr> <td>501</td><td>AGTCGGAGT</td><td>AAAGACCCAA</td><td>ATATTGACCT</td><td>AGATAAGATT</td><td>GACTCAGCAG</td></tr> <tr> <td>551</td><td>CCCTCGAGG</td><td>ATGGAAGAT</td><td>GGCTTAAAA</td><td>TAAACCAAC</td><td>AAAAACCTTT</td></tr> <tr> <td>601</td><td>TTTGTCTTAT</td><td>TTGTAGGAC</td><td>CAGTATGAG</td><td>CTCTAGTCT</td><td>TCTATGATG</td></tr> <tr> <td>651</td><td>AGTTCATCT</td><td>TGTGCGAGG</td><td>GAGTGTGCA</td><td>TATTCGATG</td><td>GCTGAGCGT</td></tr> <tr> <td>701</td><td>TTTGGCCCAA</td><td>AGCAGAGAG</td><td>GTGTGTATG</td><td>TTTCTGAGG</td><td>GTGTACGAGA</td></tr> <tr> <td>751</td><td>ATAAATCATG</td><td>TGGCTTGGG</td><td>GTGCACTG</td><td>GCATTGTGTT</td><td>AATGTCAGAG</td></tr> <tr> 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<td>1201</td><td>GGGTAGAGTG</td><td>GAATCTTTT</td><td>CTAGCAGAT</td><td>ATAGCATGGG</td><td>TTTCTGGGTG</td></tr> <tr> <td>1251</td><td>CCAATAGAGT</td><td>GTCTTAAGTG</td><td>TTGTGTTCTA</td><td>TACGTTAGT</td><td>TTGAGAGAGT</td></tr> <tr> <td>1301</td><td>GCCTTCTTAC</td><td>AGGTTTGA</td><td>AGTTGTTAAT</td><td>ATTTCCTETA</td><td>GTTCATTGAG</td></tr> <tr> <td>1351</td><td>AAGTAAAGAA</td><td>CAAGATCAA</td><td>AGAGAGAGA</td><td>GAGACACTTT</td><td>TACCAAGAGA</td></tr> <tr> <td>1401</td><td>TGAGTATGTA</td><td>AAATATGACA</td><td>TTGATGGCAT</td><td>GTAGATGTGT</td><td>TGAGATCAT</td></tr> 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