


```

-390-----400-----410-----420-----430-----440-----
150-----160-----
-|-----|-----
Input      S W . . R - - . - - D * L L * . C E . L
Consensus T F G R K L H L Y S H P I I L G F R K I
Consensus accttcggacggaattgcacctgtattcccatcccatcatcctgggctttcggaaaatt
Input      .-g...c.t...g--c.....a.cg....-.g...t...a..t...a.at..g.gg
--|-----|-----|-----|-----|-----|-----
-450-----460-----470-----480-----490-----500-----
170-----180-----
-|-----|-----
Input      V C * P - - A . C N F - - . . . . . * S .
Consensus P M G V G L S P F L L A Q F T S A I C S
Consensus cctatgggagtgggcctcagccgtttctcctggctcagttactagtgcattgttca
Input      a..c.t....aatg-.c.a...---a.t...at.c..c.aa.c.---.....t.
--|-----|-----|-----|-----|-----|-----
-510-----520-----530-----540-----550-----560-----
190-----200-----
-|-----|-----
Input      L . - - - - - . V . L . . . P T P R . . . .
Consensus V V R R A F P H C L A F S Y M D D V V L
Consensus gtggttcgtagggctttccccactgtttggctttcagttatatggatgatgtggattg
Input      aa.ac.g.g...ag--.....ggg..t.a.t.a.....c...a.a..a.t
--|-----|-----|-----|-----|-----|-----
-570-----580-----590-----600-----610-----620-----
210-----220-----
-|-----|-----
Input      . . G G - - - - . Q T . G R G R S V . . .
Consensus G A K S V Q H L E S L F T A V T N F L L
Consensus gggccaagtctgtacagcatcttgagtcctttttaccgctgttaccattttcttttg
Input      --.t.t-.-...ac.....c.a..caa-.....t...a.t..c.c..g..c..
--|-----|-----|-----|-----|-----|-----
-630-----640-----650-----660-----670-----680-----
230-----240-----
-|-----|-----
Input      . R S * Q K T A C R G . K - - - - -
Consensus S L G I H L N P N K T K R W G Y S L H F
Consensus tctttgggtatacatttaaaccctaacaaaacaaaagatgggttactctttacatttc
Input      .g..c.c...nc.t.....a.....t..g..g.t....g.....ct...ag.
--|-----|-----|-----|-----|-----|-----
-690-----700-----710-----720-----730-----740-----

250-----
-|-----
Input      - - - - -
Consensus M G Y V I G
Consensus atgggctatgtcattgg
Input      .aaa..g-...c-...
--|-----|-----
-750-----760---

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Figure S2. Dual-drug-resistant mutation observed in cases of HBV-related HCC from North India. The input sequence (yellow) bears the amino acid I in place of the expected L, as observed in the reference sequence (green) at codon 80 (blue). The mutation L80I is a lamivudine mutation and a compensatory mutation for M204V/I. Again, at codon 236 (blue) there is a mutation from N→T, which is a mutant to adefovir.