

S gene:	loss of the “a” determinant (= absence of vaccine protection)
Pre-S gene:	loss of B and T cell epitopes or loss of the pre-S ₂ promoter region or loss of the pre-S ₂ start codon (= no neutralization of the virus by anti-HBs)
Pre-C/C gene:	inhibition of the “e” antigen synthesis (= severe course of disease)
C gene:	loss of T cell epitopes (= tendency to fulminant hepatitis) <ul style="list-style-type: none"> • so-called <i>escape mutant</i>
P gene:	loss of polymerase (= accelerated elimination of the virus, “unfit” mutant) <ul style="list-style-type: none"> • so-called <i>replication defect</i>