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(54) Title: STABILIZED IMMUNOGENIC HBc CHIMER PARTICLES

A

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Ground Squirrel  mylfhlcclvf acvpeptvgs sklclgwlwd
1
Hbc AYW          mdiopykefg atvellsflp sdfpvsrdl ldtassalyre
Hbc ADW          mdiopykefg atvellsflp sdfpvsrdl ldtassalyre
Hbc ADW2         mdiopykefg atvellsflp sdfpvsrdl ldtassalyre
Hbc ADYW         mdiopykefg atvellsflp sdfpvsrdl ldtassalyrd
Woodchuck       mdiopykefg ssyqllnflp ldffpdlnal vdtatalyee
Ground Squirrel mdiopykefg ssyqllnflp ldffpdlnal vdtatalyee

41
Hbc AYW          alespehcsp hhtalrqail cwgelmtlat wvgnlledpa
Hbc ADW          alespehcsp hhtalrqail cwgelmtlat wvgnlledpa
Hbc ADW2         alespehcsp hhtalrqail cwgelmtlat wvgnlledpa
Hbc ADYW         alespehcsp hhtalrqail cwgelmtlat wvgnlledpa
Woodchuck       eltgrehcsp hhtalrqalv cweidtklia wmsnsitseq
Ground Squirrel eltgrehcsp hhtalrqalv cweidtklia wmsnsitseq

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(57) Abstract: A chimeric, carboxy-terminal truncated hepatitis B virus nucleocapsid (core) protein (HBc) that is engineered for both enhanced stability of self-assembled particles and the substantial absence of nucleic acid binding by those particles is disclosed. The chimeric protein molecule can include one or more immunogenic epitopes peptide-bonded to one or more of the N-terminus, the immunogenic loop or the C-terminus of HBc. The enhanced stability of self-assembled particles is obtained by the presence of at least one heterologous cysteine residue near one or both of the amino-terminus and carboxy-terminus of the chimer molecule and the absence of the cysteine residues present in the native sequence at HBc positions 48 and 107.

B

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81
Hbc AYW          erdlvsvyn tnmplktrql lwfhiscldf gretvieyly
Hbc ADW          erdlvsvyn tnmplktrql lwfhiscldf gretvieyly
Hbc ADW2         erdlvsvyn tnmplktrql lwfhiscldf gretvieyly
Hbc ADYW         erdlvsvyn tnmplktrql lwfhiscldf gretvieyly
Woodchuck       vrtiavnhvn dtwplkvrqs lwfhiscldf ghtvqeflv
Ground Squirrel rriivdnhvn twgikvrqtl wfhlscldtf ghtvqeflv

121
Hbc AYW          sfgwirtpp ayrrpnasil stlpettvvr rrrrsprrrt
Hbc ADW          sfgwirtpp ayrrpnasil stlpettvvr rrrrsprrrt
Hbc ADW2         sfgwirtpp ayrrpnasil stlpettvvr rrrrsprrrt
Hbc ADYW         sfgwirtpp ayrrpnasil stlpettvvr rrrrsprrrt
Woodchuck       sfgwirtpp ayrrpnasil stlpettvvr rrrrsprrrt
Ground Squirrel fgwirtpp ayrrpnasil stlpettvvr rrrrsprrrt

161
Hbc AYW          psprrrrsqs prrrrsqrs sqc
Hbc ADW          rtpsrrrrs qsprrrrsqs resqc
Hbc ADW2         rtpsrrrrs qsprrrrsqs resqc
Hbc ADYW         psprrrrsqs prrrrsqrs sqc
Woodchuck       prrrrsprrr rrsqsprrrr sqc
Ground Squirrel rrrrsprrr rrsqsprrrs qspasnc

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WO 2004/053091 A2