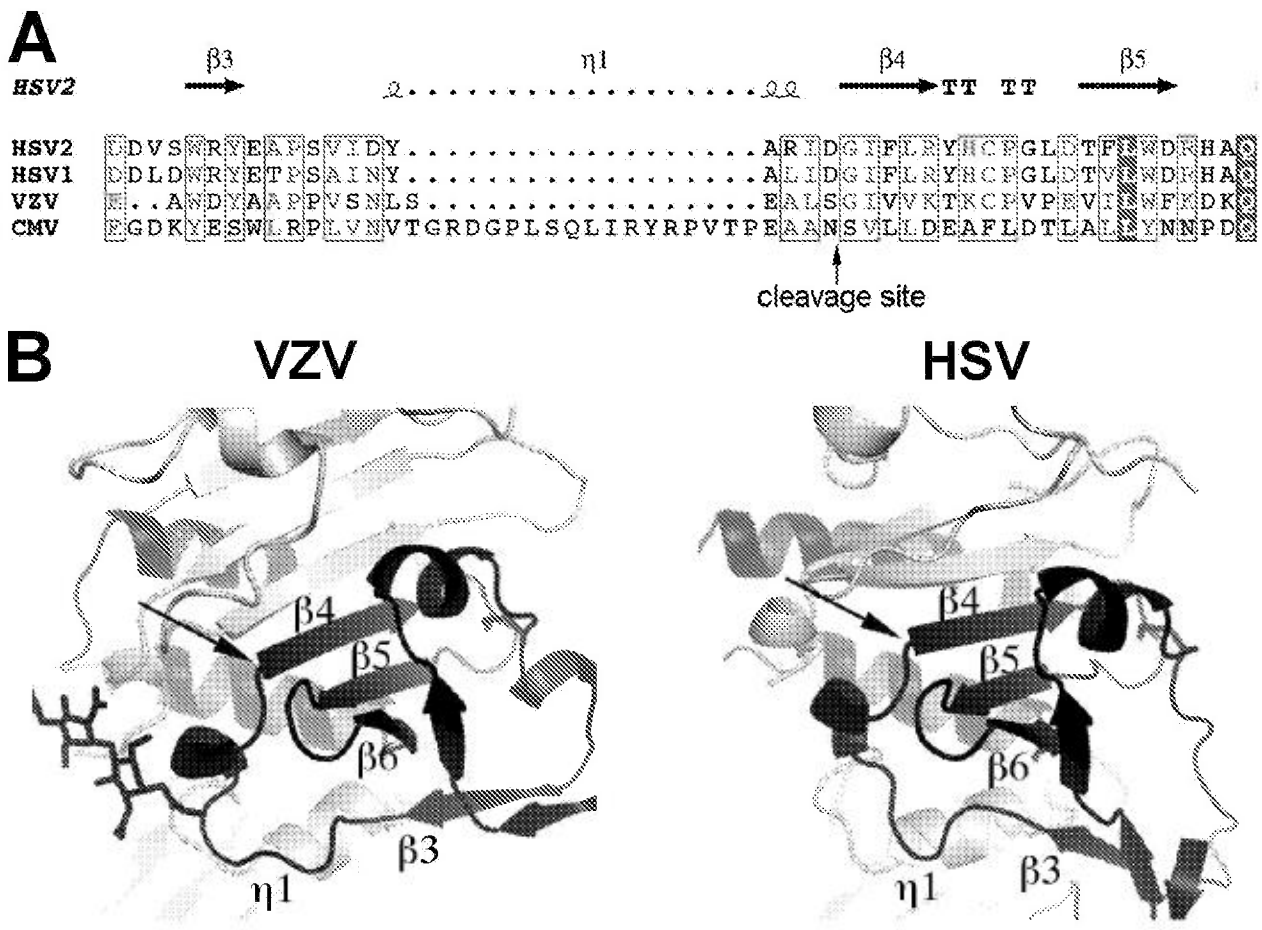
A
β3
η1
β4
β5
HSV2
HSV2
HSV1
VZV
CMV
cleavage site
B
VZV
HSV
β4
β5
β6
β3
η1

Figure 1

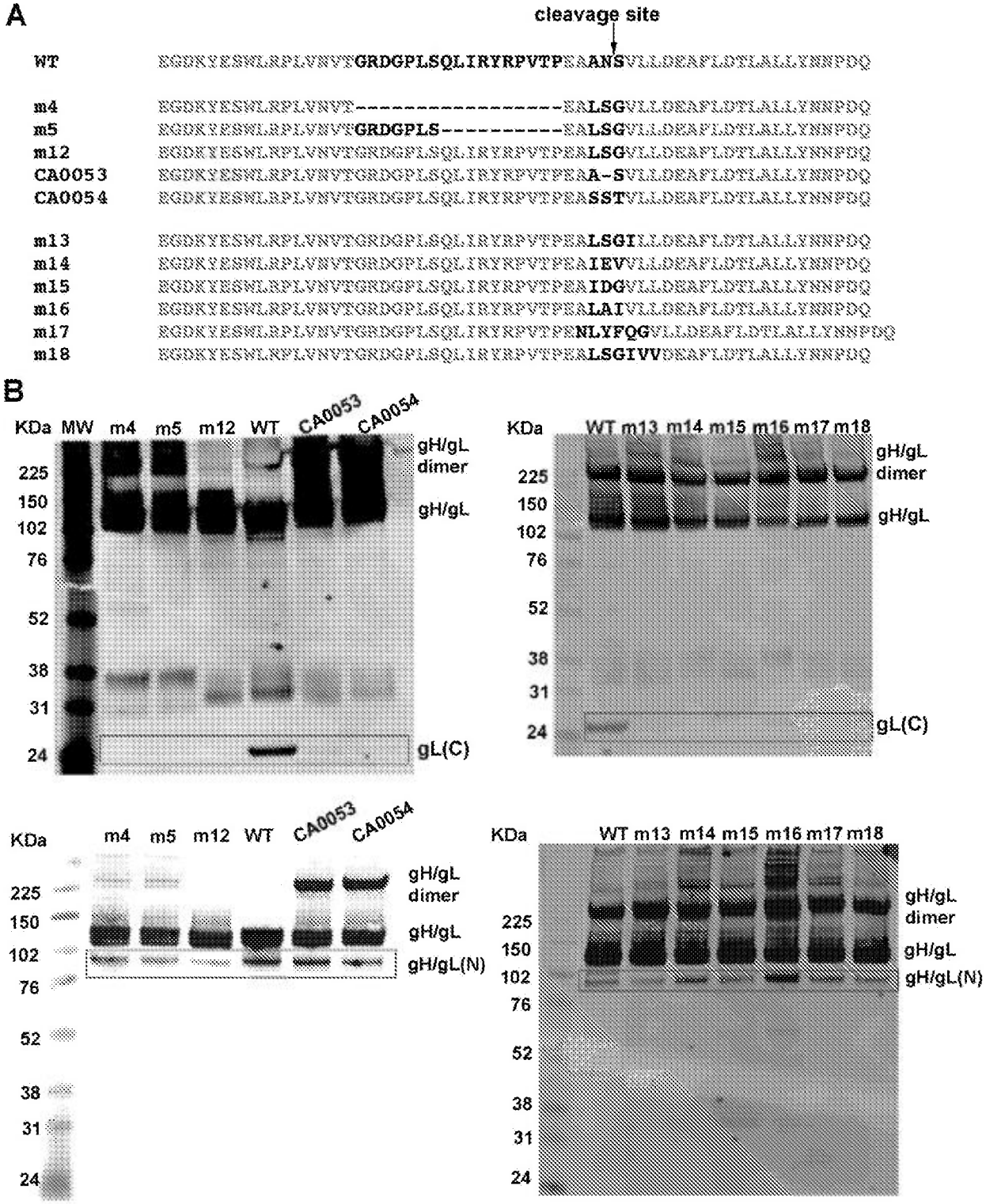
A
cleavage site
WT EGDKYESWLRPLVNVTGRDGPLSQLIRYRPVTPEAANSVLLDEAFLDTLALLYNNPDQ
m4 EGDKYESWLRPLVNVT----------EALSGVLLDEAFLDTLALLYNNPDQ
m5 EGDKYESWLRPLVNVTGRDGPLS----------EALSGVLLDEAFLDTLALLYNNPDQ
m12 EGDKYESWLRPLVNVTGRDGPLSQLIRYRPVTPEALSGVLLDEAFLDTLALLYNNPDQ
CA0053 EGDKYESWLRPLVNVTGRDGPLSQLIRYRPVTPEAA-SVLLDEAFLDTLALLYNNPDQ
CA0054 EGDKYESWLRPLVNVTGRDGPLSQLIRYRPVTPEASSTVLLDEAFLDTLALLYNNPDQ
m13 EGDKYESWLRPLVNVTGRDGPLSQLIRYRPVTPEALSGILLDEAFLDTLALLYNNPDQ
m14 EGDKYESWLRPLVNVTGRDGPLSQLIRYRPVTPEAIEVVLLDEAFLDTLALLYNNPDQ
m15 EGDKYESWLRPLVNVTGRDGPLSQLIRYRPVTPEAIDGVLLDEAFLDTLALLYNNPDQ
m16 EGDKYESWLRPLVNVTGRDGPLSQLIRYRPVTPEALAIVLLDEAFLDTLALLYNNPDQ
m17 EGDKYESWLRPLVNVTGRDGPLSQLIRYRPVTPENLYFQGVLLDEAFLDTLALLYNNPDQ
m18 EGDKYESWLRPLVNVTGRDGPLSQLIRYRPVTPEALSGIVVDEAFLDTLALLYNNPDQ
B
KDa MW m4 m5 m12 WT CA0053 CA0054
225
150
102
76
52
38
31
24
gH/gL dimer
gH/gL
gL(C)
KDa WT m13 m14 m15 m16 m17 m18
225
150
102
76
52
38
31
24
gH/gL dimer
gH/gL
gL(C)
C
KDa m4 m5 m12 WT CA0053 CA0054
225
150
102
76
52
38
31
24
gH/gL dimer
gH/gL
gH/gL(N)
KDa WT m13 m14 m15 m16 m17 m18
225
150
102
76
52
38
31
24
gH/gL dimer
gH/gL
gH/gL(N)

Figure 2

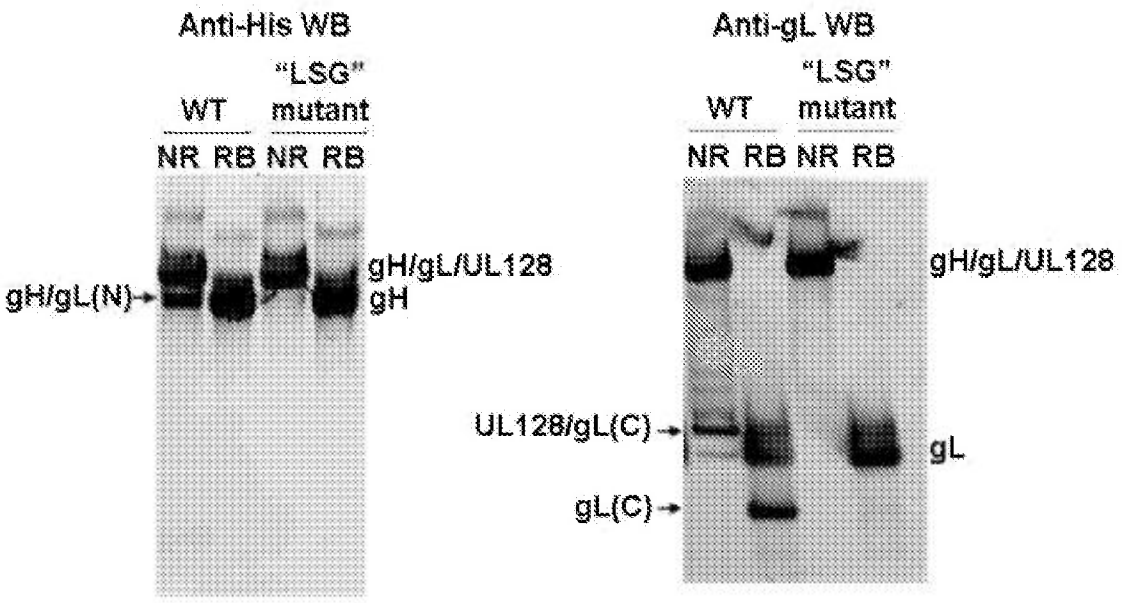

Figure 3

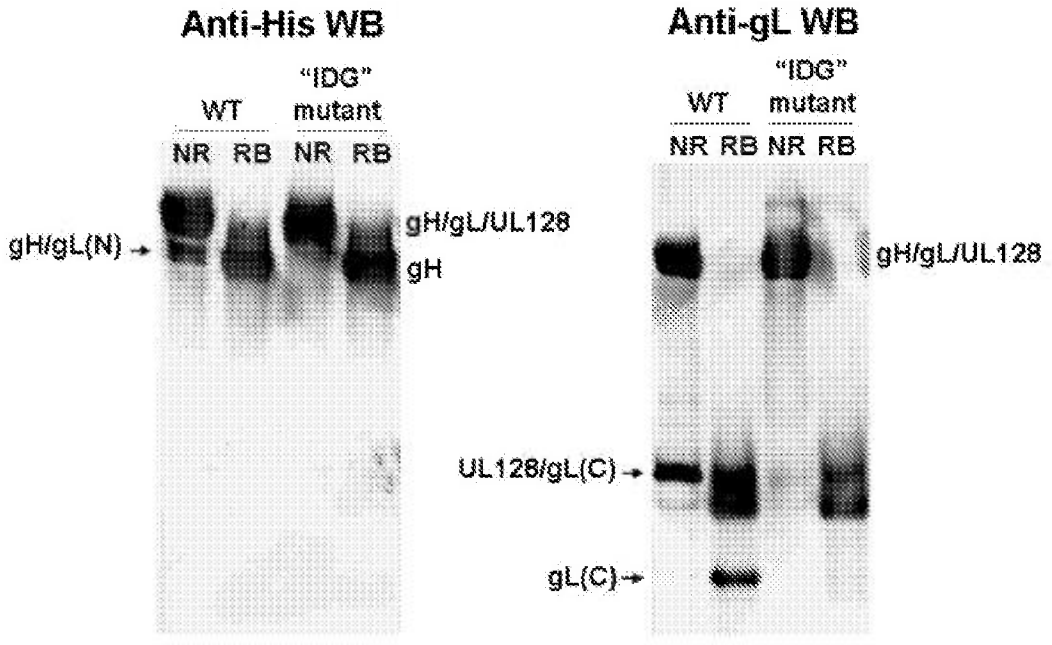

Figure 4

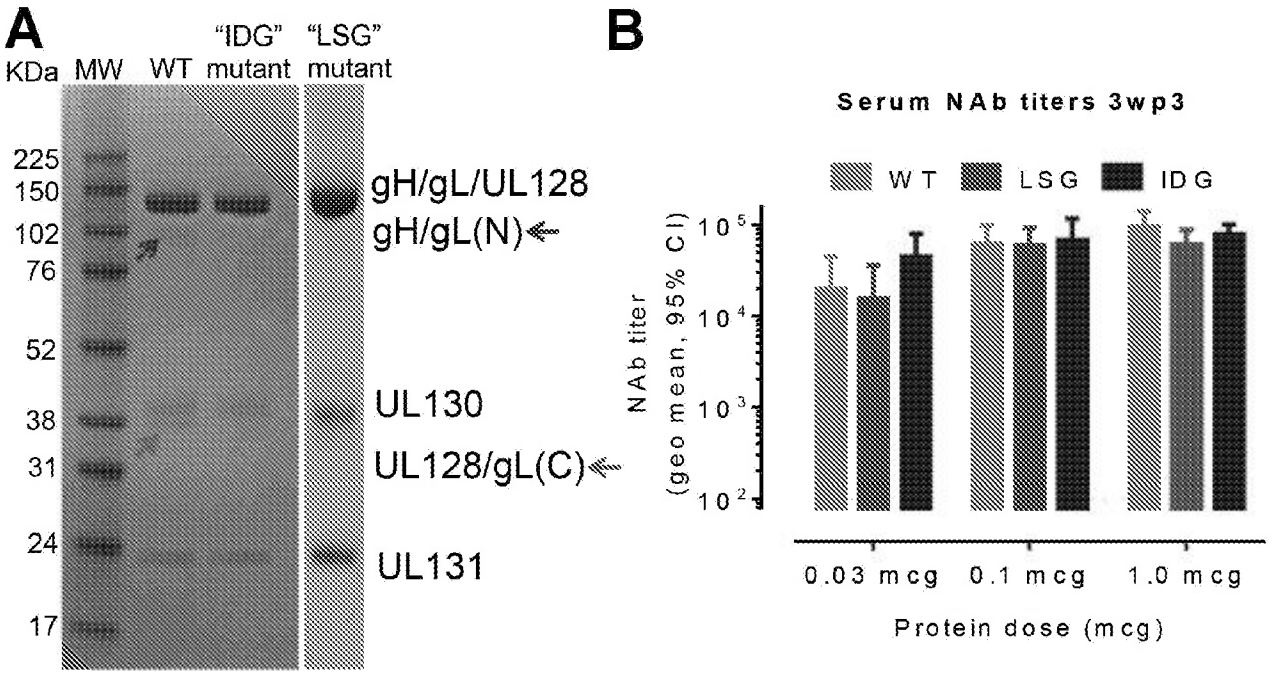
A
KDa
MW
WT
"IDG" mutant
"LSG" mutant
225
150
102
76
52
38
31
24
17
gH/gL/UL128
gH/gL(N)
UL130
UL128/gL(C)
UL131
B
Serum NAb titers 3wp3
WT
LSG
IDG
NAb titer (geo mean, 95% CI)
10^5
10^4
10^3
10^2
0.03 mcg
0.1 mcg
1.0 mcg
Protein dose (mcg)

Figure 5