

# HIV Molecular Immunology: Maps of MAb Locations Plotted by Protein

Theoretical Biology & Biophysics, Los Alamos National Laboratory

October 5, 2004

The names of MAbs and the location of well characterized linear binding sites of 21 amino acids or less are indicated relative to the protein sequences of the HXB2 clone. This map is meant to provide the relative location of epitopes on a given protein, but the HXB2 sequence may not actually bind to the MAb of interest, as it may vary relative to the sequence for which the epitope was defined. Above each linear binding site, the MAb name is given followed by the species in parentheses. Human is represented by 'h', non-human primate by 'p', mouse by 'm', and others by 'o'. More precise species designations for any given MAb can be found using the web search interface.

Table 1: The species for which the epitopes react

Key	Species
h	human
p	non-human primate
m	murine
o	other
<i>blank</i>	unknown or not specified

# 1 p17 Ab Epitope Map

Figure 1: p17 Ab Map aa 1–50

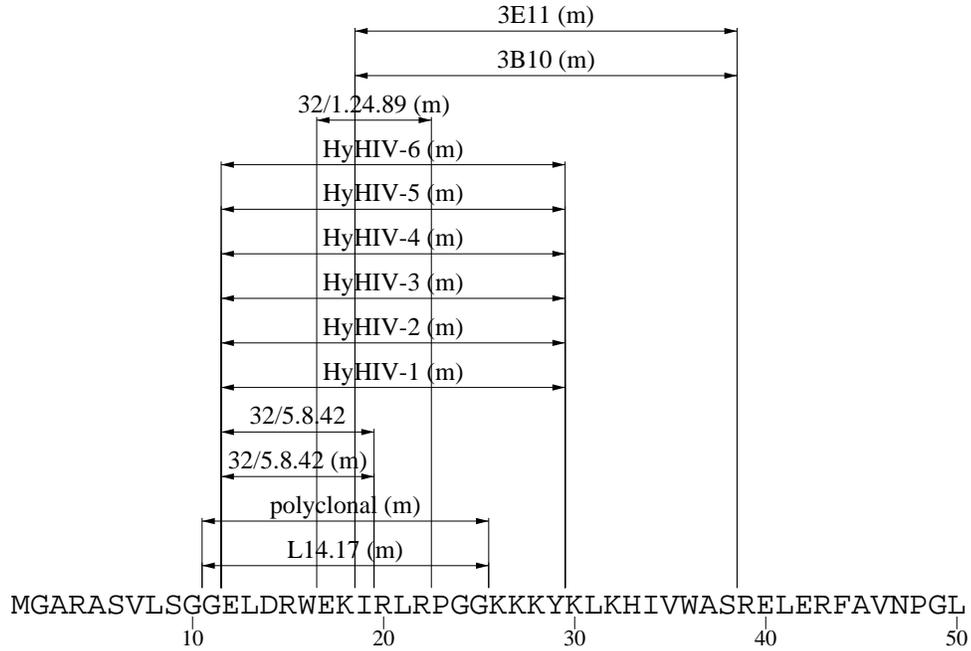


Figure 2: p17 Ab Map aa 51–100

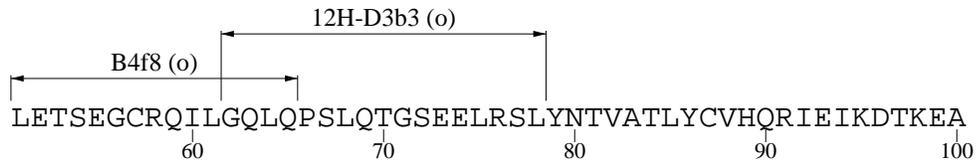
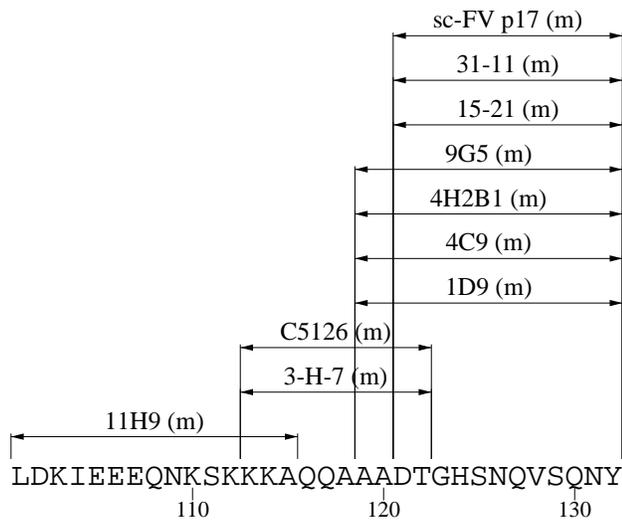


Figure 3: p17 Ab Map aa 101–132



## 2 p24 Ab Epitope Map

Figure 4: p24 Ab Map aa 1–50

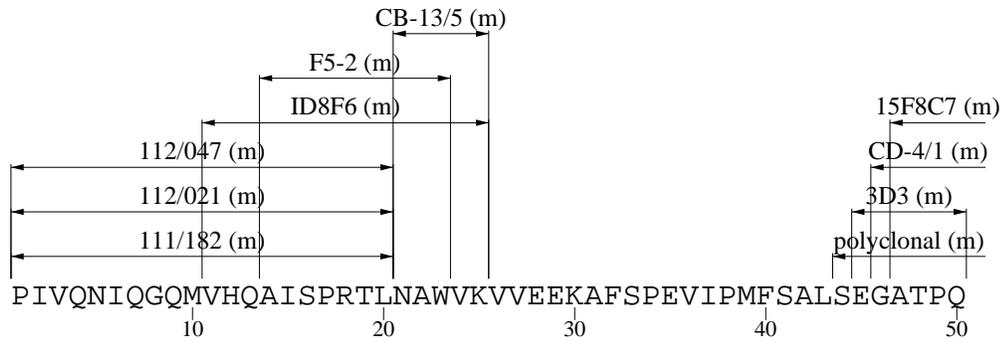


Figure 5: p24 Ab Map aa 51–100

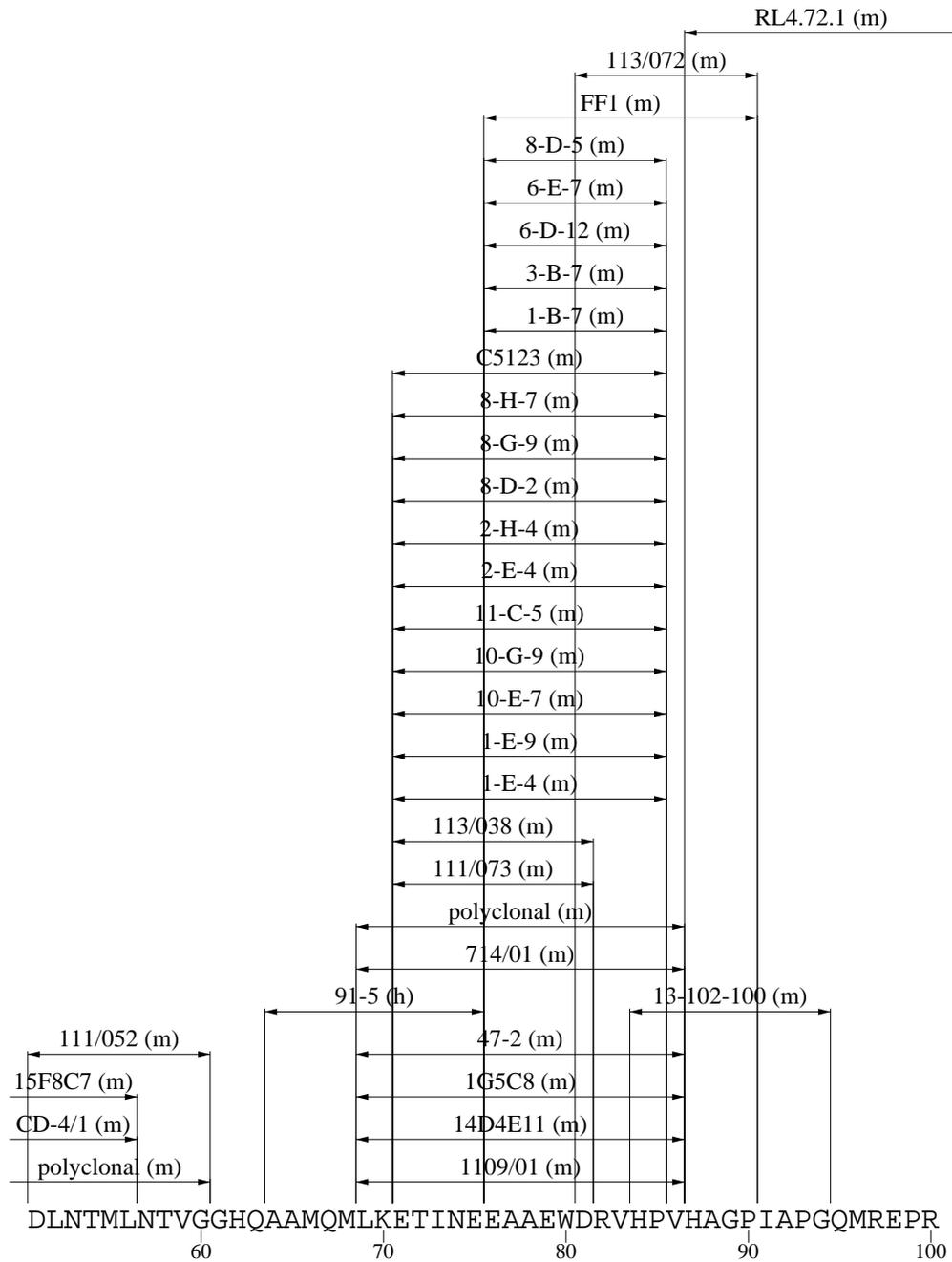


Figure 6: p24 Ab Map aa 101–150

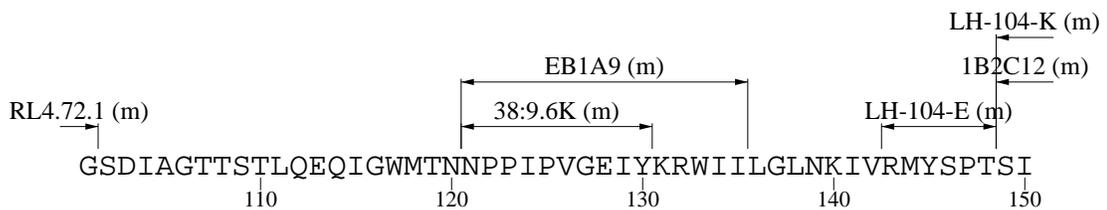


Figure 7: p24 Ab Map aa 151–200

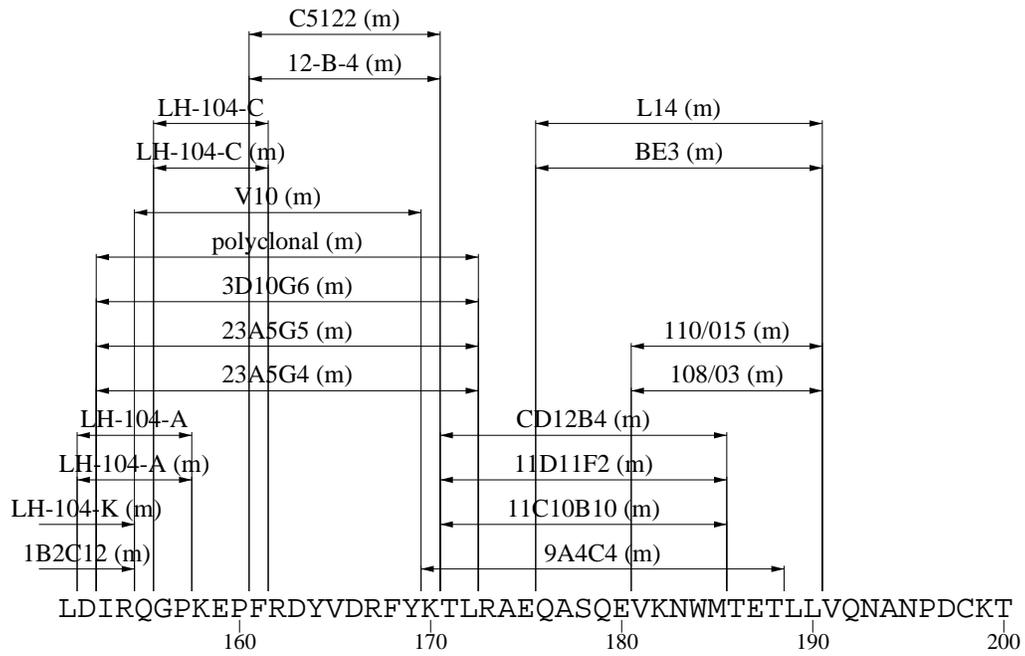
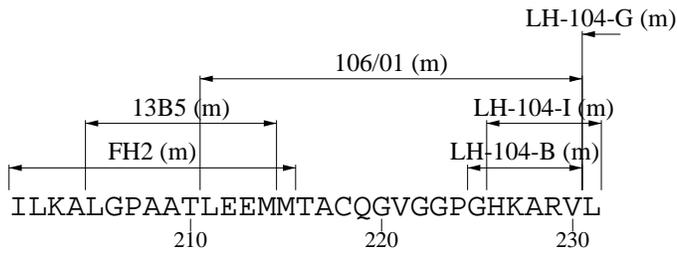


Figure 8: p24 Ab Map aa 201–231



### 3 p2p7p1p6 Ab Epitope Map

Figure 9: p2p7p1p6 Ab Map aa 1–50

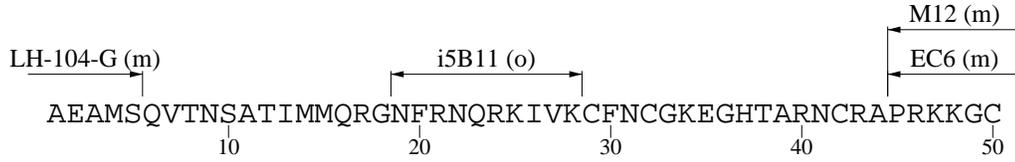


Figure 10: p2p7p1p6 Map aa 51–100

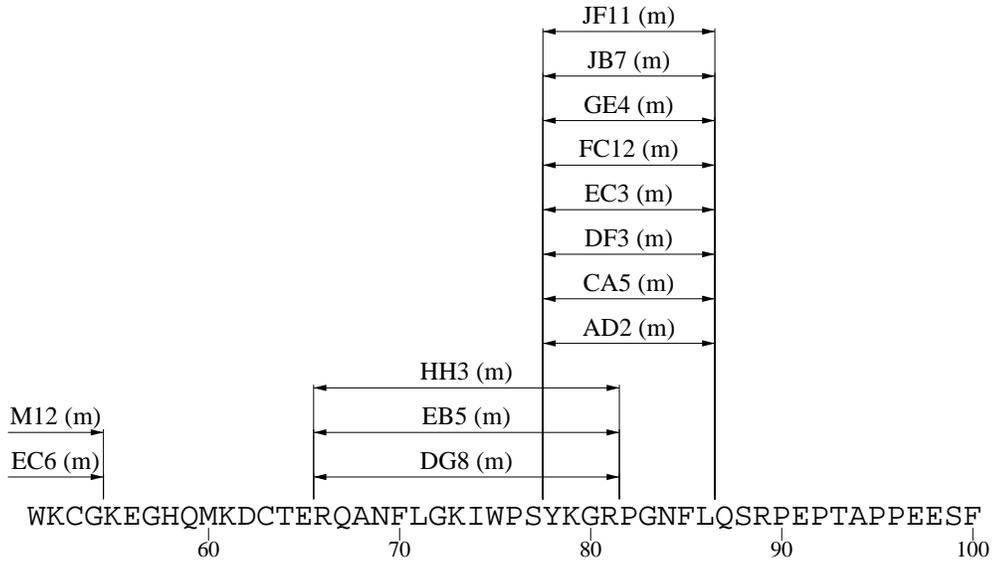


Figure 11: p2p7p1p6 Map aa 101–137



## 4 Protease Ab Epitope Map

Figure 12: Protease Ab Map aa 1–50

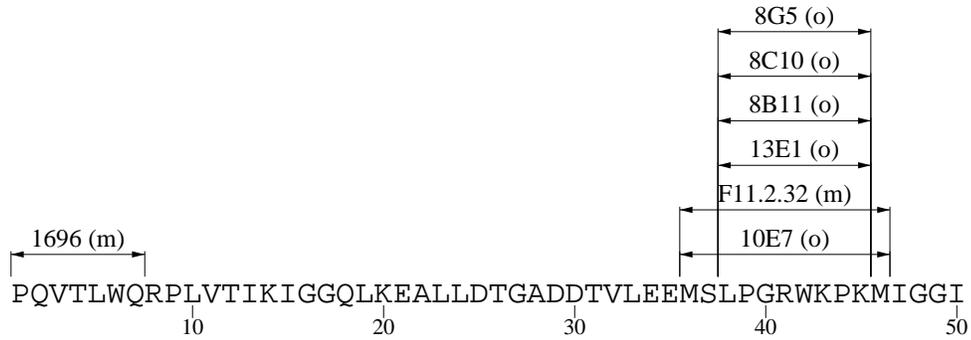


Figure 13: Protease Map aa 51–99



## 5 RT Ab Epitope Map

Figure 14: RT Ab Map aa 1–50

PISPIETVPVKKLPGMDGPKVKQWPLTEEKIKALVEICTEMEKEGKISKI  
 10 20 30 40 50

Figure 15: RT Ab Map aa 51–100

GPENPYNTPVFAIKKKDSTKWRKLVDFRELNKRTQDFWEVQLGIPHPAGL  
 60 70 80 90 100  
 1E8 (m)

Figure 16: RT Ab Map aa 101–150

KKKKSVTVLDVGDAYFSVPLDEDFRKYTAFTTIPSINNETPGIRYQYNVLP  
 110 120 130 140 150

Figure 17: RT Ab Map aa 151–200

QGWKGSPAIFQSSMTKILEPFRKQNPDIVIYQYMDDLIVGSDLEIGQHRT  
 160 170 180 190 200

Figure 18: RT Ab Map aa 201–250

KIEELRQHLLRWGLTTPDKKHQKEPPFLWWMGYELHPDKWTVQPIVLPEKD  
 210 220 230 240 250

Figure 19: RT Ab Map aa 251–300

SWTVNDIQKLVGKLNWASQIYPGIKVRQLCKLLRGTKALTEVIPLTEEAEE  
 260 270 280 290 300  
 polyclonal (h)  
 1.158 E2 (m)  
 1.152 B3 (m)

Figure 20: RT Ab Map aa 301–350

LELAENREILKEPVHGVYYDPSKDLIAEIQKQGQGWTYQIYQEPFKNLK  
 310 320 330 340 350  
 polyclonal (h)  
 1.158 E2 (m)  
 1.152 B3 (m)  
 1.153 G10 (m)

Figure 21: RT Ab Map aa 351–400

TGKYARMRGAHTNDVKQLTEAVQKITTESIWIWGKTPKFKLPIQKETWET  
 360 370 380 390 400  
 RT6H (m)  
 ID4A3 (m)  
 RTMAb8 (m)  
 1.153 G10 (m)

Figure 22: RT Ab Map aa 401–450

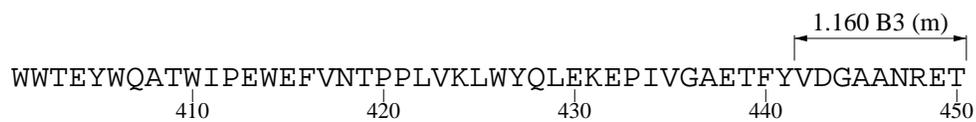


Figure 23: RT Ab Map aa 451–500

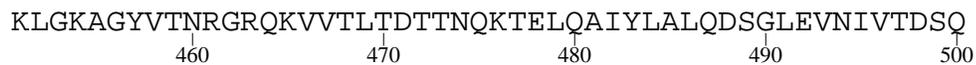


Figure 24: RT Ab Map aa 501–550

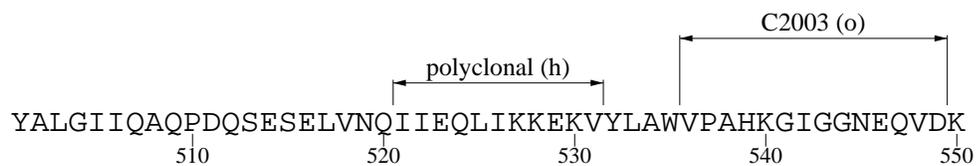
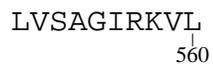


Figure 25: RT Ab Map aa 551–560



## 6 Integrasi Ab Epitope Map

Figure 26: Integrasi Ab Map aa 1–50

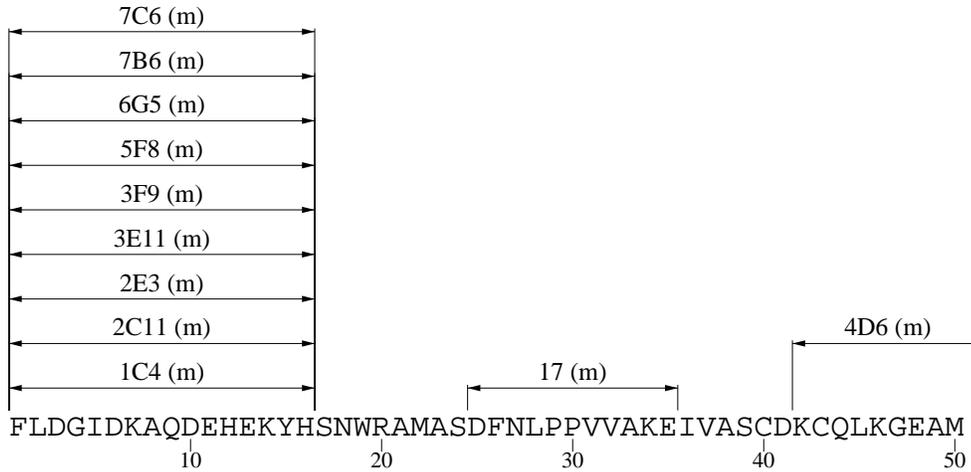


Figure 27: Integrasi Ab Map aa 51–100



Figure 28: Integrasi Ab Map aa 101–150



Figure 29: Integrasi Ab Map aa 151–200



Figure 30: Integrasi Ab Map aa 201–250

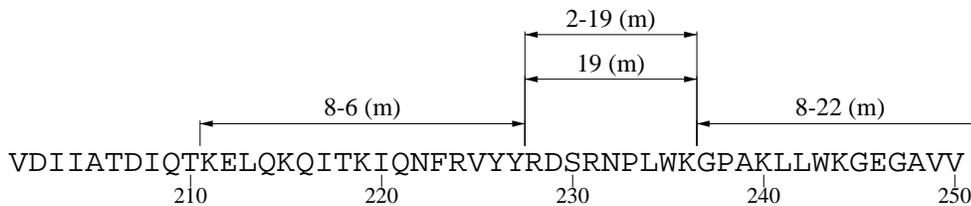
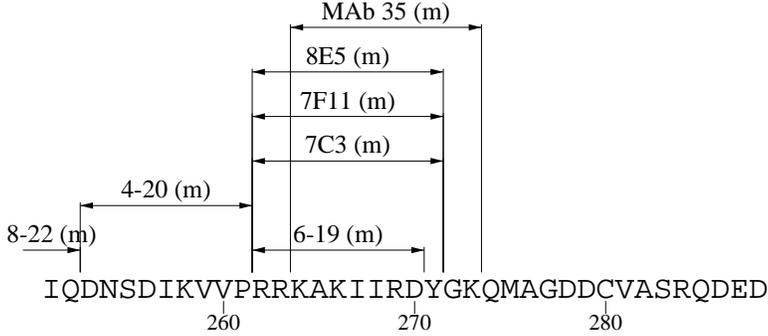


Figure 31: Integrase Ab Map aa 251-288



## 7 Rev Ab Epitope Map

Figure 32: Rev Ab Map aa 1–50

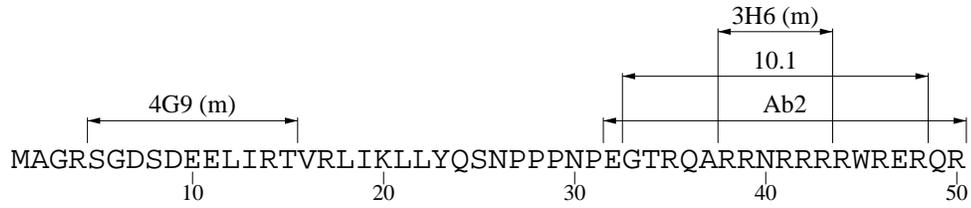


Figure 33: Rev Ab Map aa 51–100

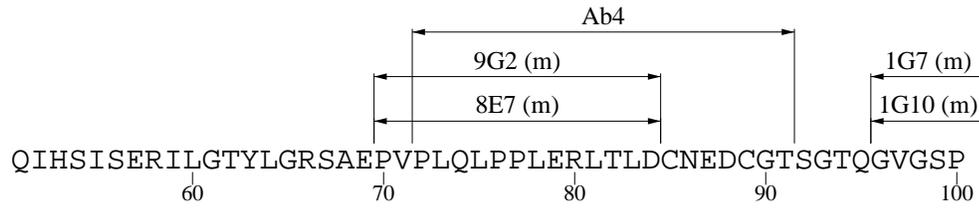
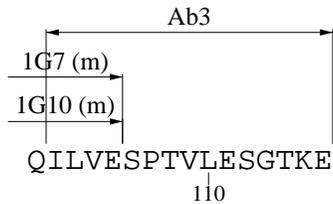


Figure 34: Rev Ab Map aa 101–116



## 8 Tat Ab Epitope Map

Figure 35: Tat Ab Map aa 1–50

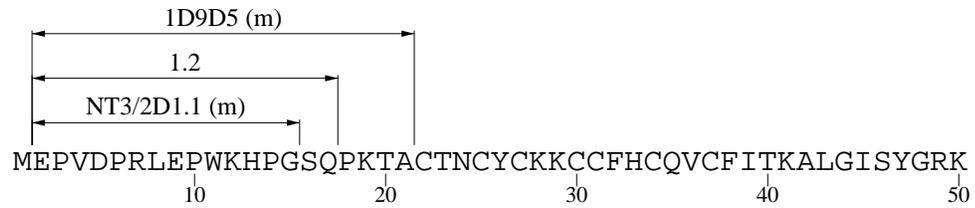


Figure 36: Tat Ab Map aa 51–100

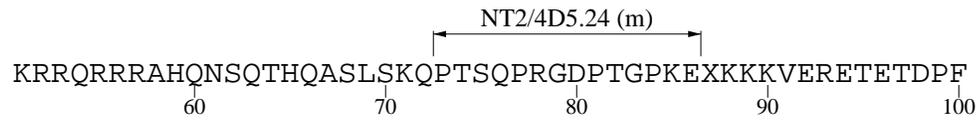


Figure 37: Tat Ab Map aa 101

D  
101

## 9 Vif Ab Epitope Map

Figure 38: Vif Ab Map aa 1–50

MENRWQVMIVWQVDRMIRIRTWKSLVKHHMYVSGKARGWFWYRHHYESPHPR  
 10 20 30 40 50  
 TG002 (m)

Figure 39: Vif Ab Map aa 51–100

ISSEVHIPLGDARLVITTYWGLHTGERDWHLGQGVSIIEWRKKRYSTQVDP  
 60 70 80 90 100

Figure 40: Vif Ab Map aa 101–150

ELADQLIHLYYFDCFSDSAIRKALLGHIVSPRCEYQAGHNKVGSLQYLAL  
 110 120 130 140 150

Figure 41: Vif Ab Map aa 151–192

AALITPKKIKPPLPSVTKLTEDRWNKPKTKGHRGSHTMNGH  
 160 170 180 190  
 TG001 (m)

## 10 Vpr Ab Epitope Map

Figure 42: Vpr Ab Map aa 1–50

MEQAPEDQGPQREPHNEWTLLELLEELKNEAVRHFPRIWLHGLGQHIYETY  
                          10                          20                          30                          40                          50

Figure 43: Vpr Ab Map aa 51–96

GDTWAGVEAIIIRILQQLLFIHFRIGCRHSRIGVTRQRRARNGASRS  
                          60                          70                          80                          90

## 11 Vpu Ab Epitope Map

Figure 44: Vpu Ab Map aa 1–50

TQPIPIVAI VALVVAIIIIAIVVWSIVII EYRKILRQRKIDRLIDRLIERA  
                  10                  20                  30                  40                  50

Figure 45: Vpu Ab Map aa 51–82

EDSGNESEGEI SALVEMGVEMGHHAPWDVDDL  
                  60                  70                  80

## 12 gp160 Ab Epitope Map

Figure 46: gp160 Ab Map aa 1–50

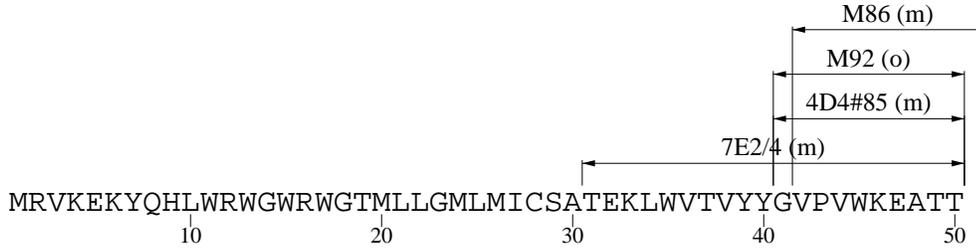


Figure 47: gp160 Ab Map aa 51–100

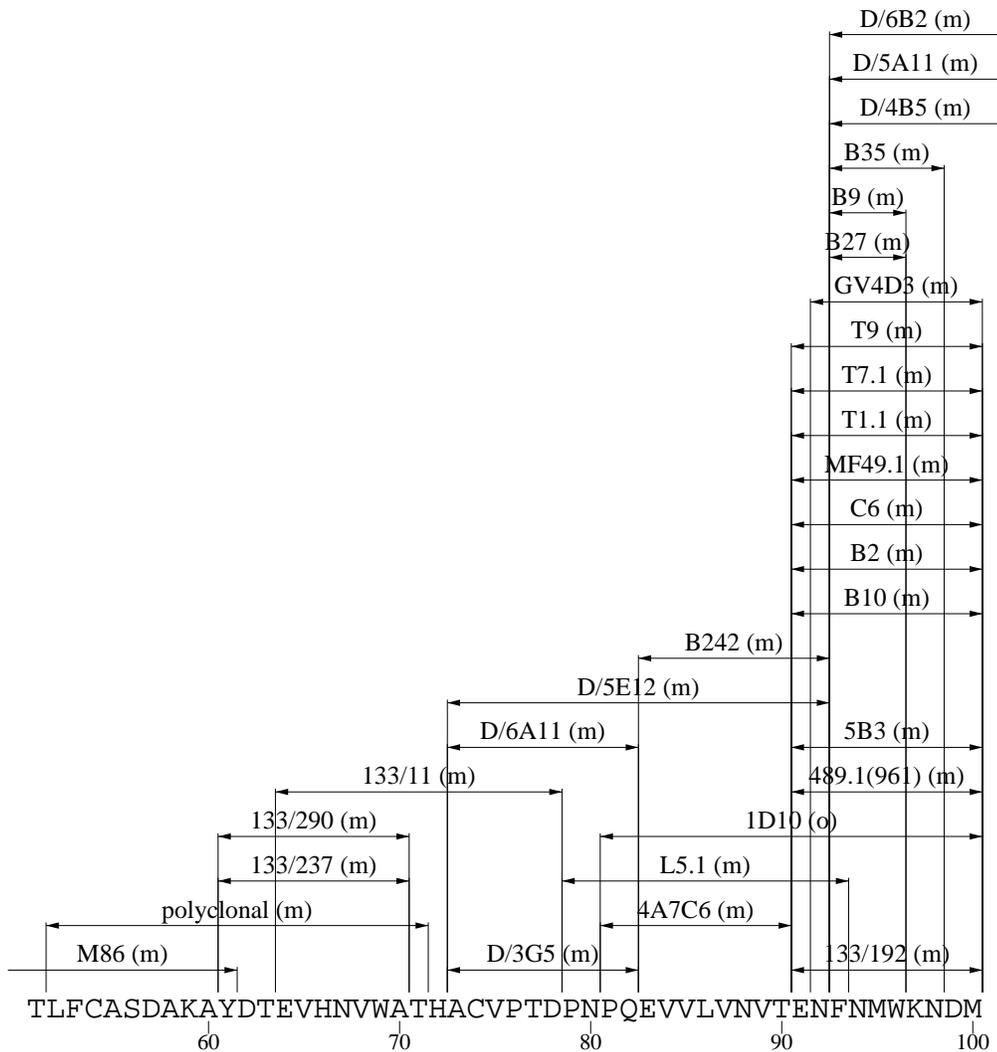


Figure 48: gp160 Ab Map aa 101–150

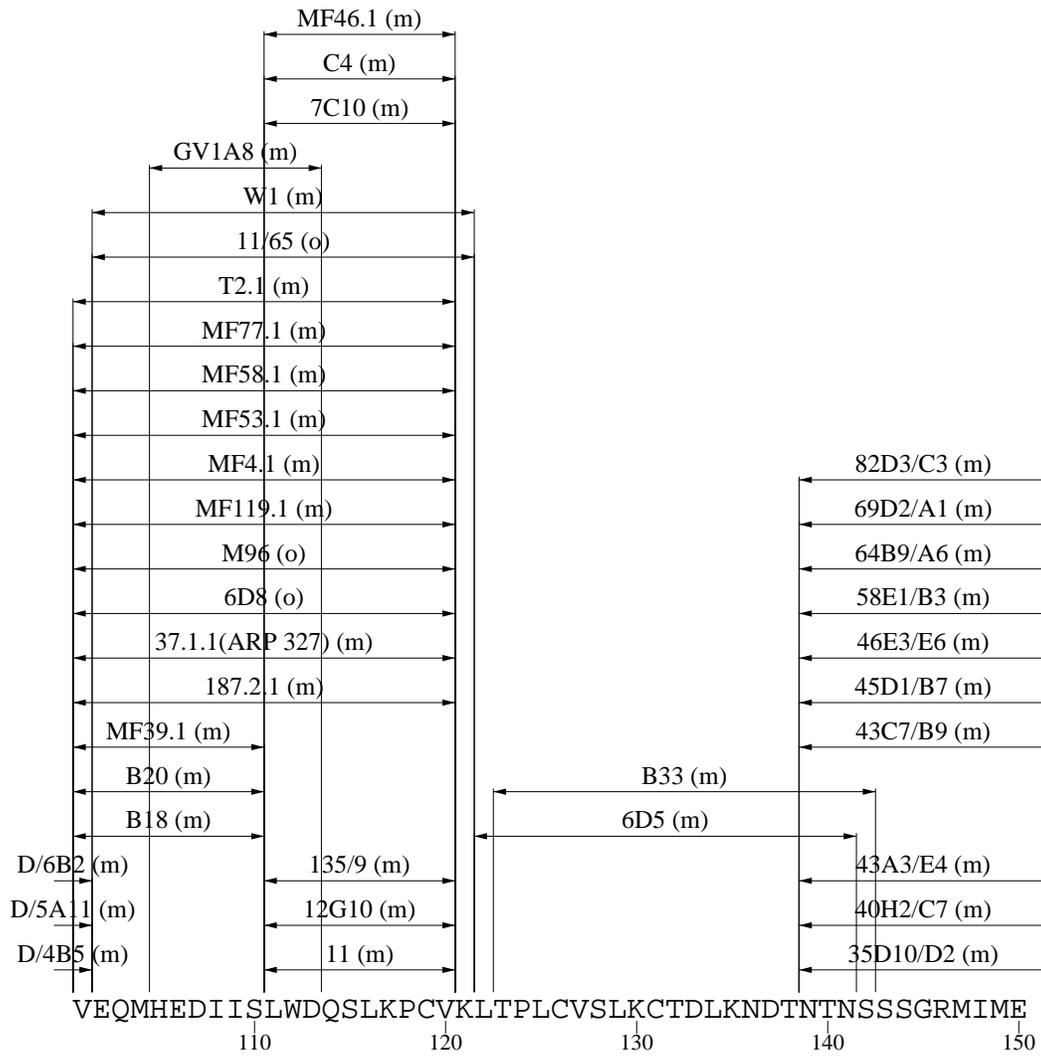


Figure 49: gp160 Ab Map aa 151–200

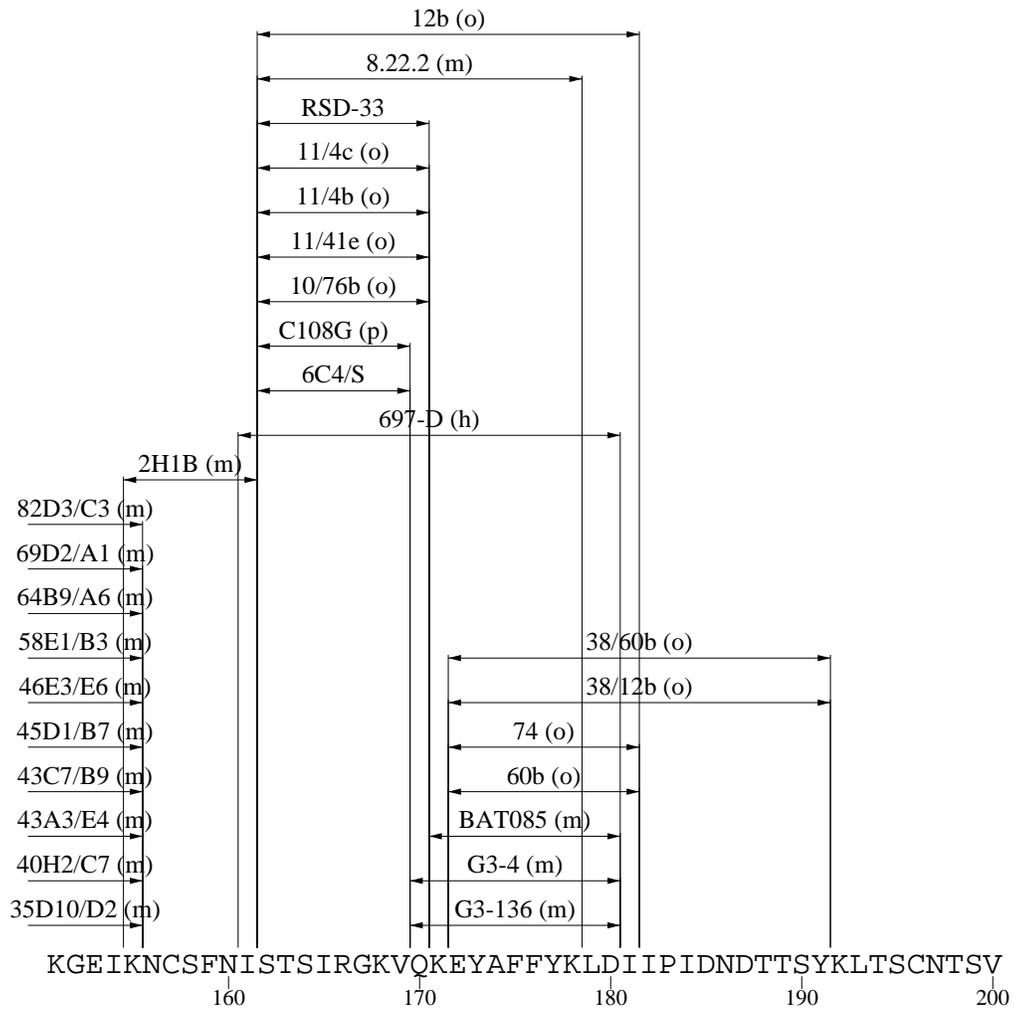


Figure 50: gp160 Ab Map aa 201–250

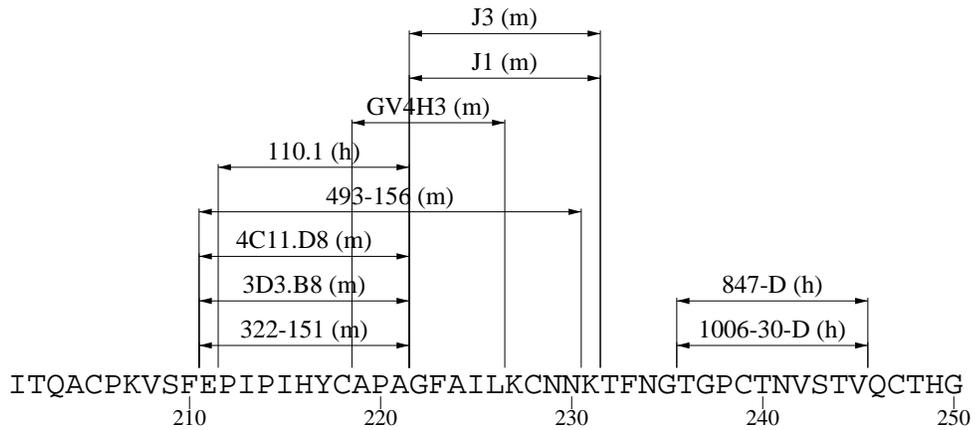


Figure 51: gp160 Ab Map aa 251–300

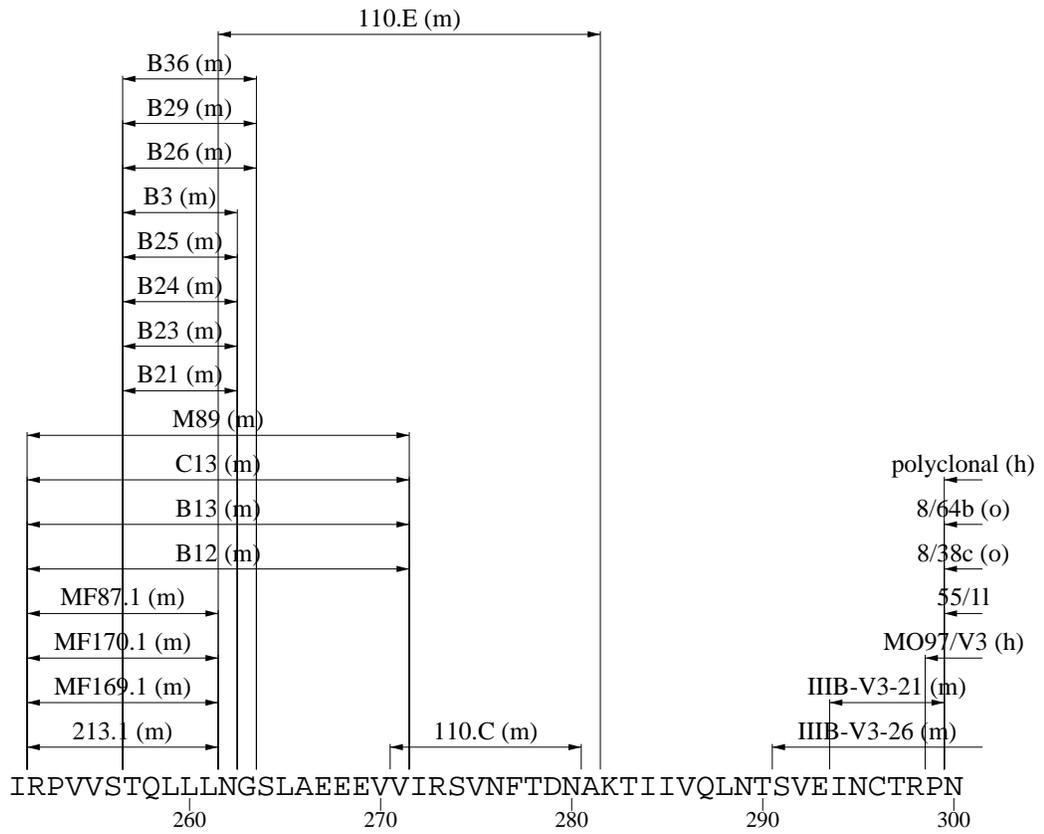


Figure 52: gp160 Ab Map aa 301–350 1/4

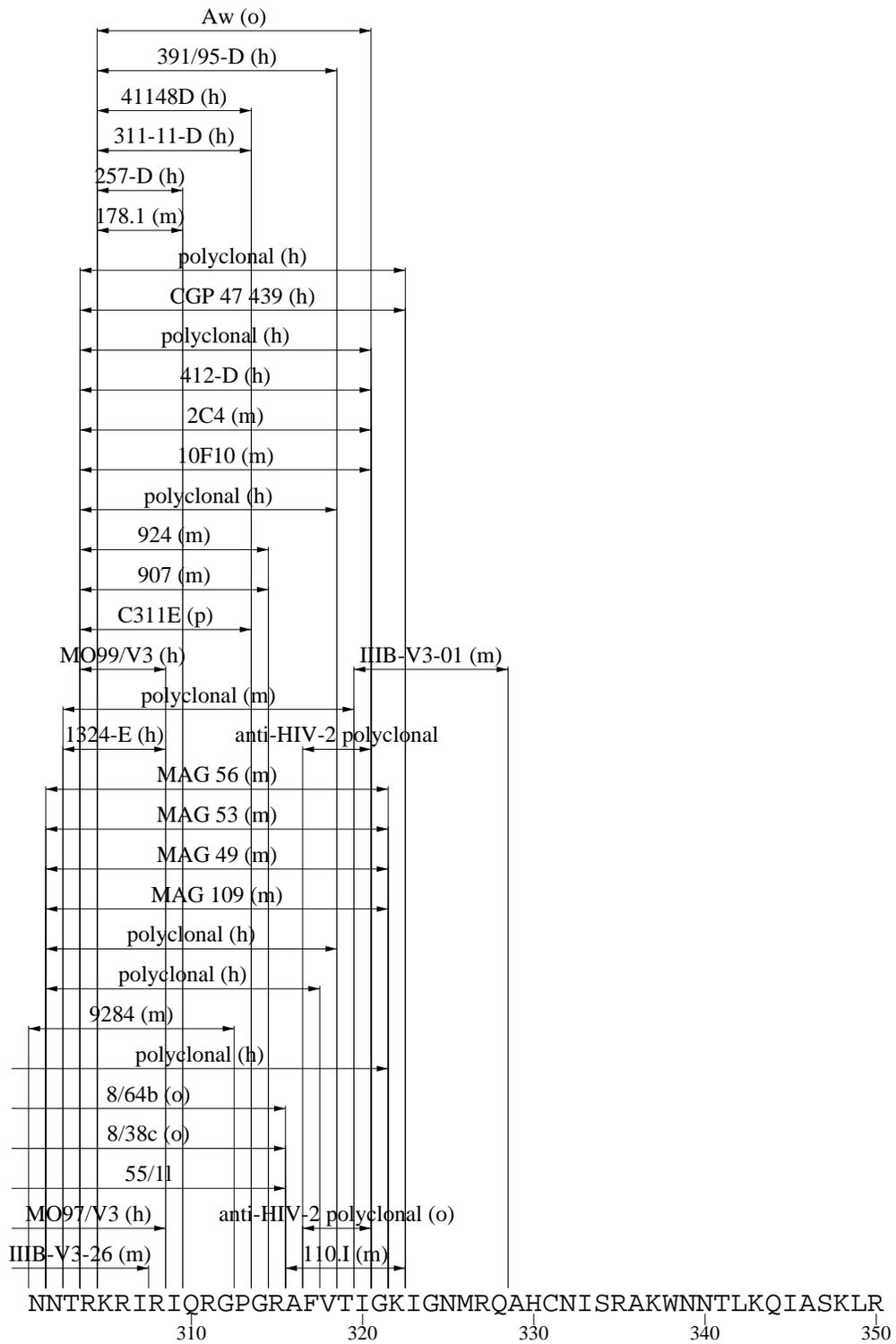


Figure 53: gp160 Ab Map aa 301–350 2/4

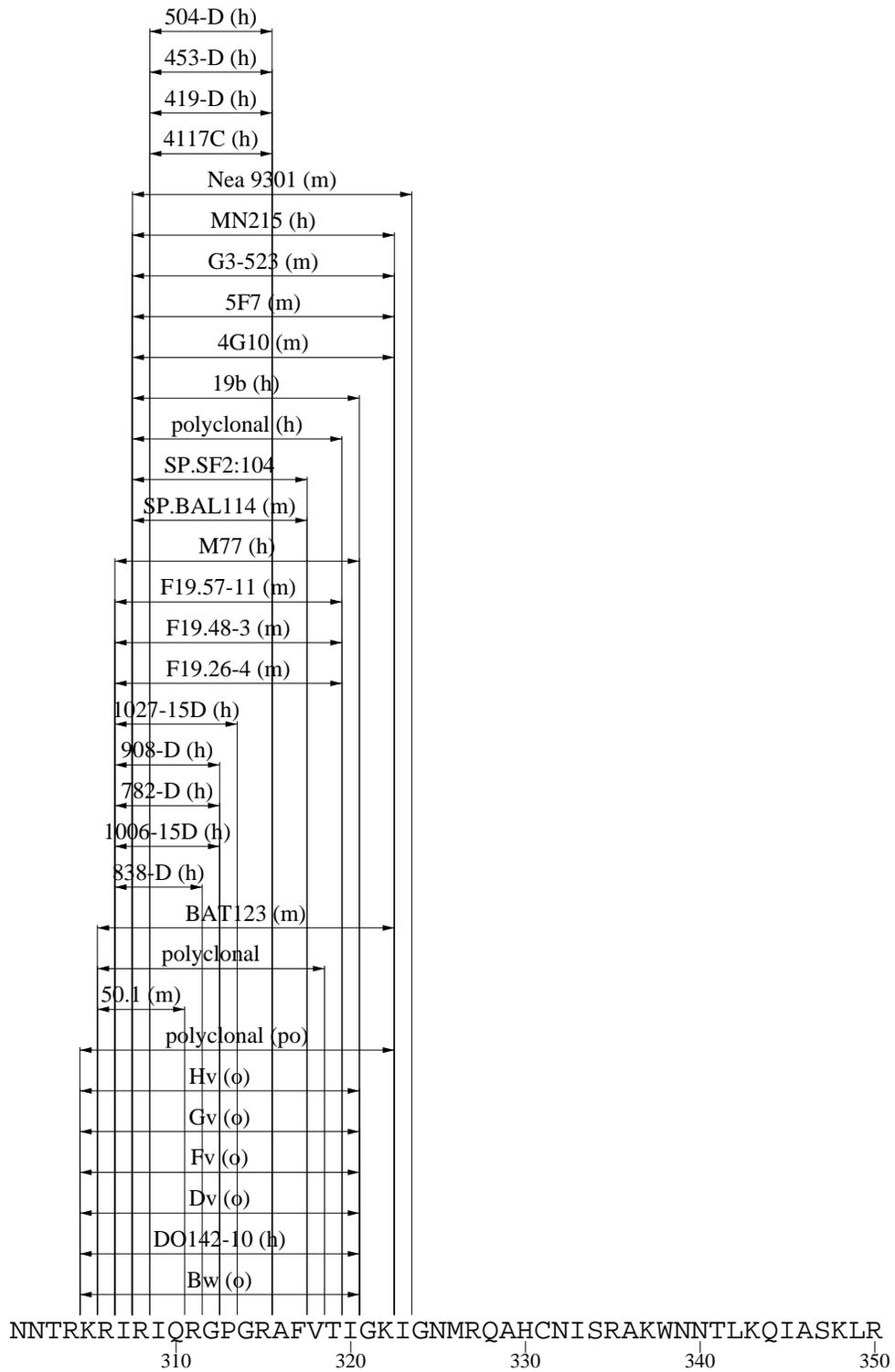


Figure 54: gp160 Ab Map aa 301–350 3/4

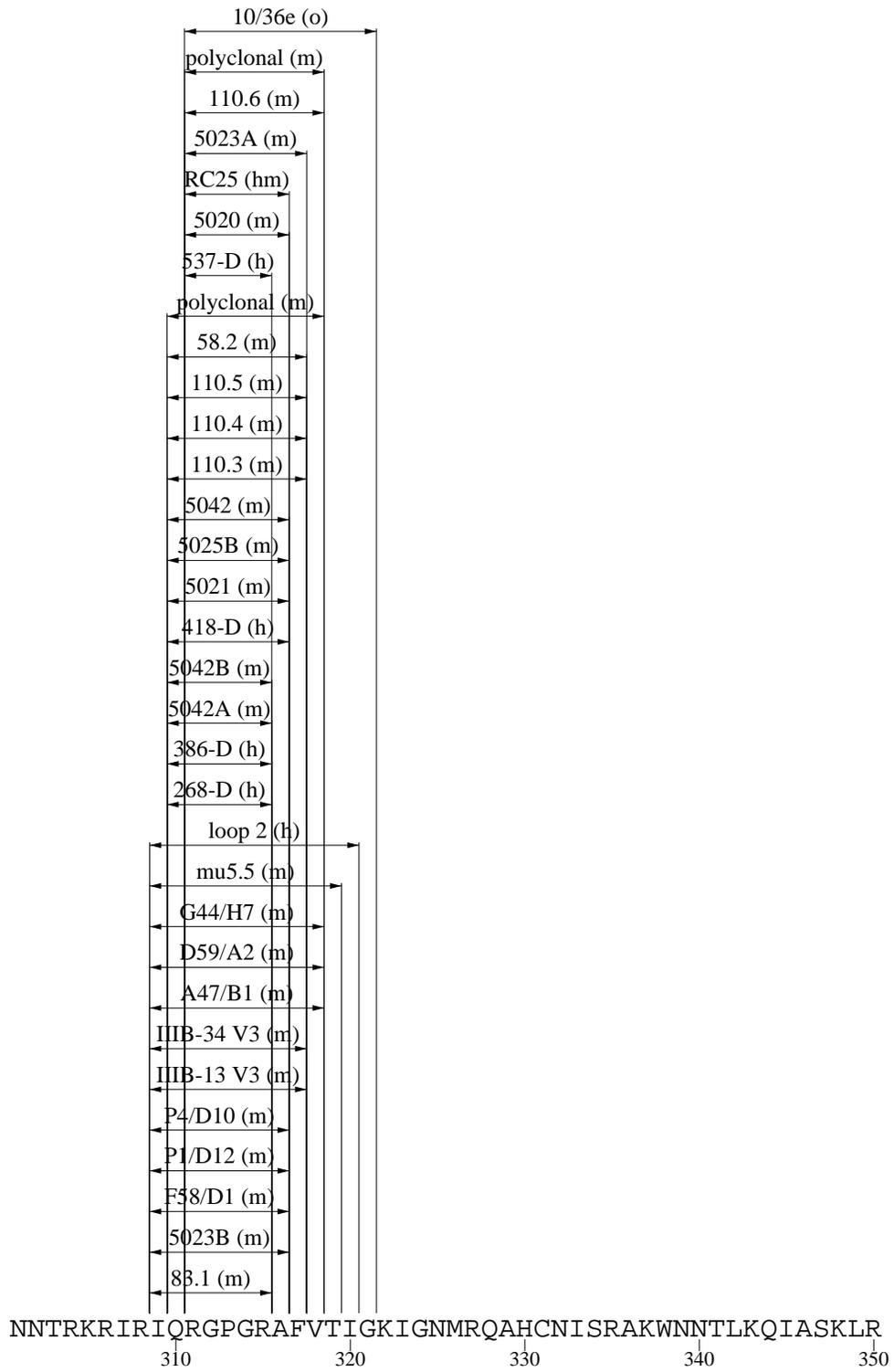


Figure 55: gp160 Ab Map aa 301–350 4/4

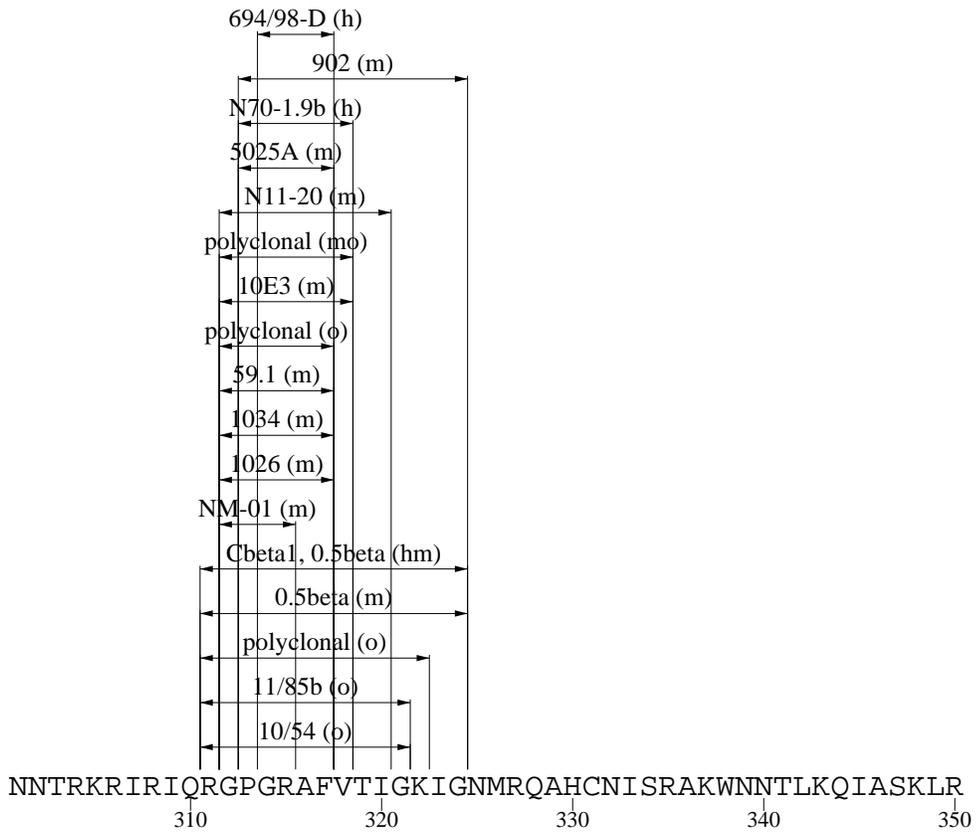


Figure 56: gp160 Ab Map aa 351–400



Figure 57: gp160 Ab Map aa 401–450

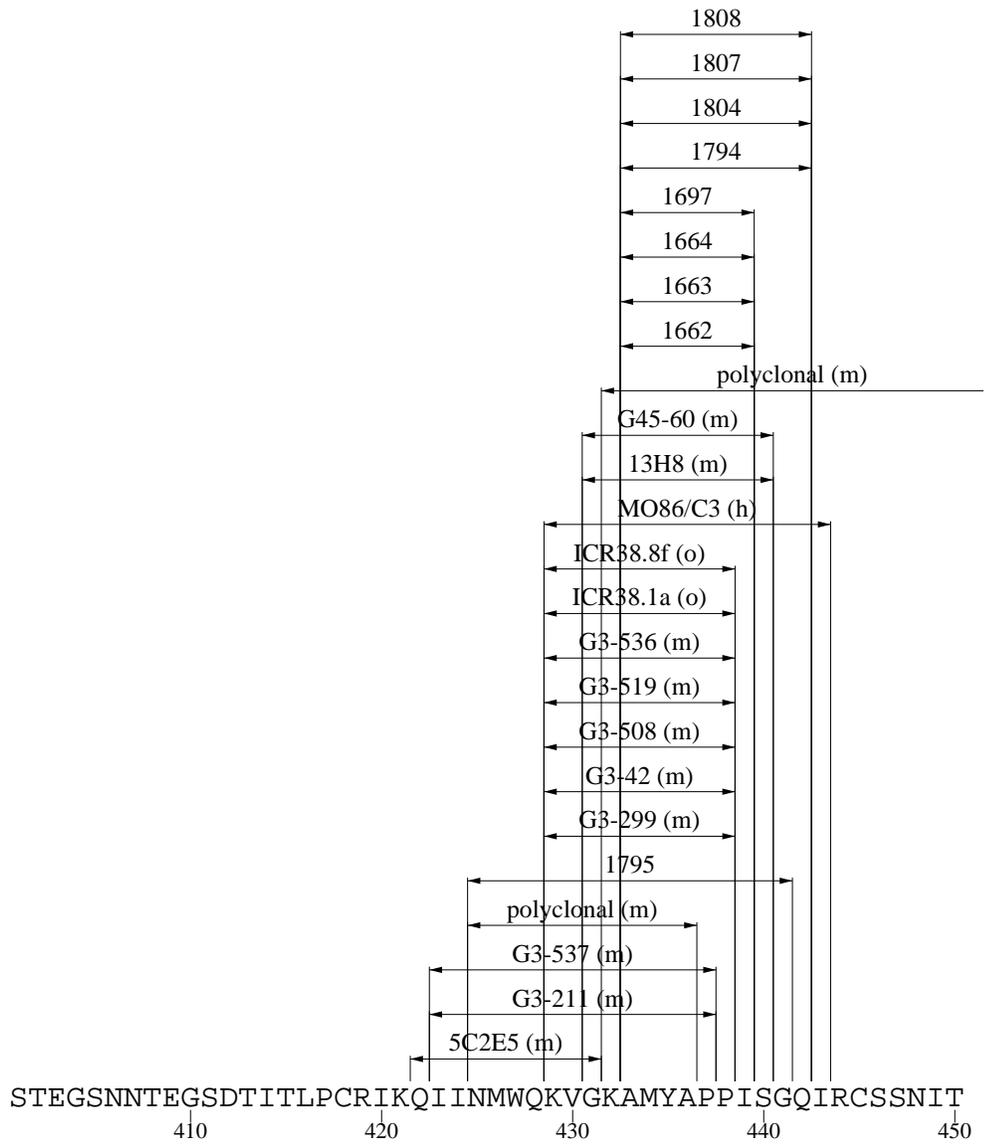


Figure 58: gp160 Ab Map aa 451–500

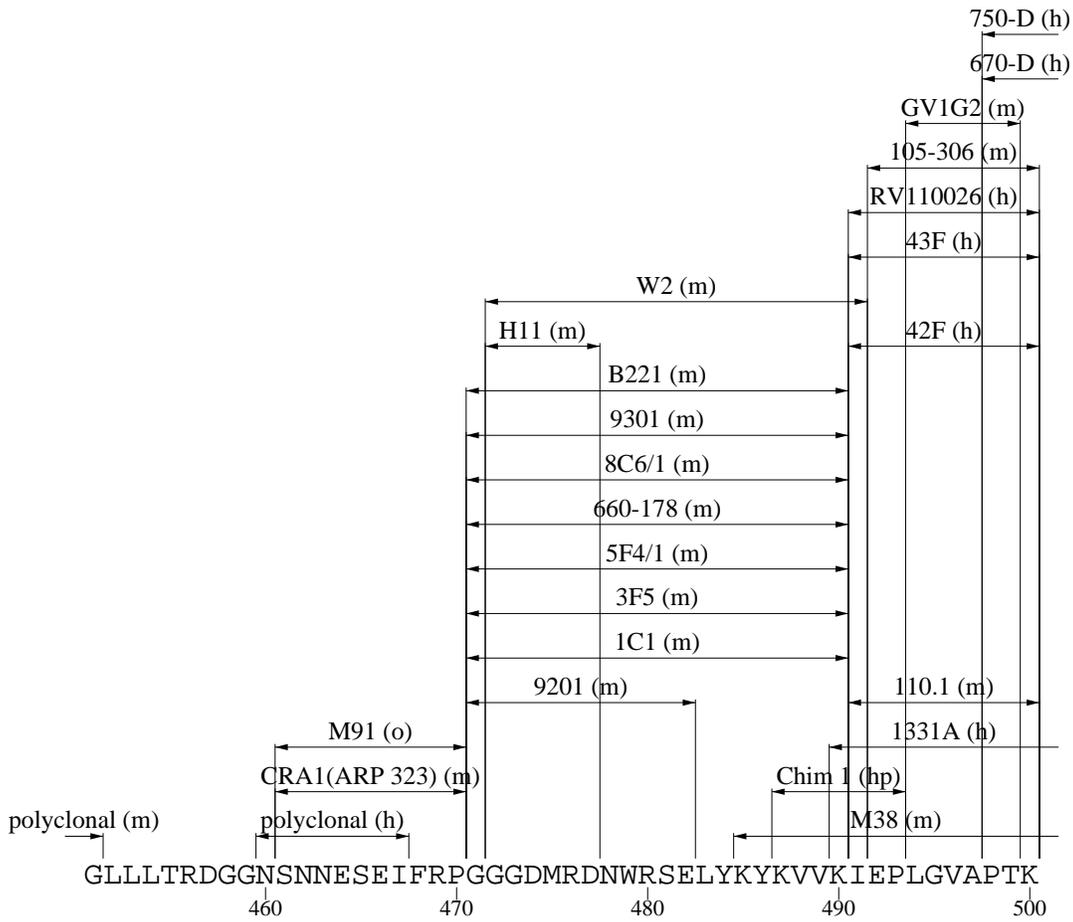


Figure 59: gp160 Ab Map aa 501–550

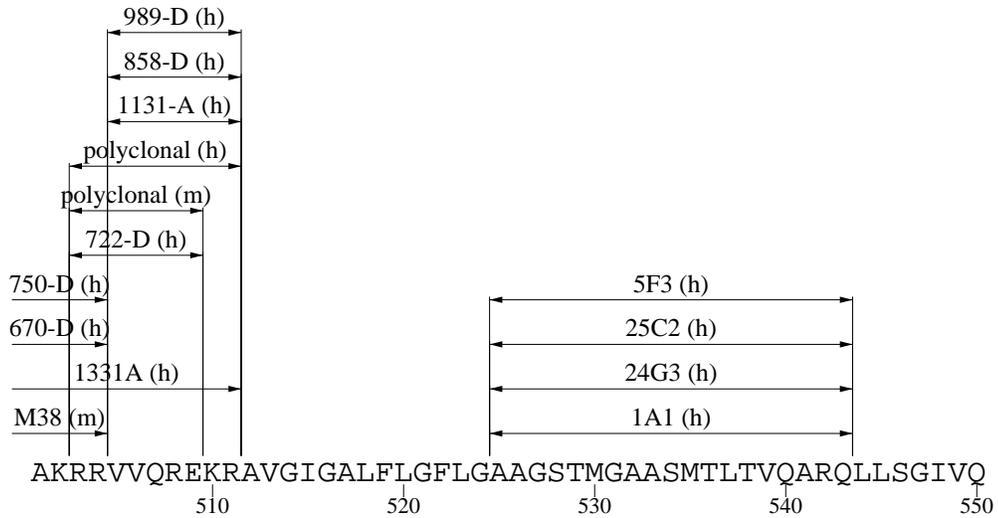


Figure 60: gp160 Ab Map aa 551–600 1/2

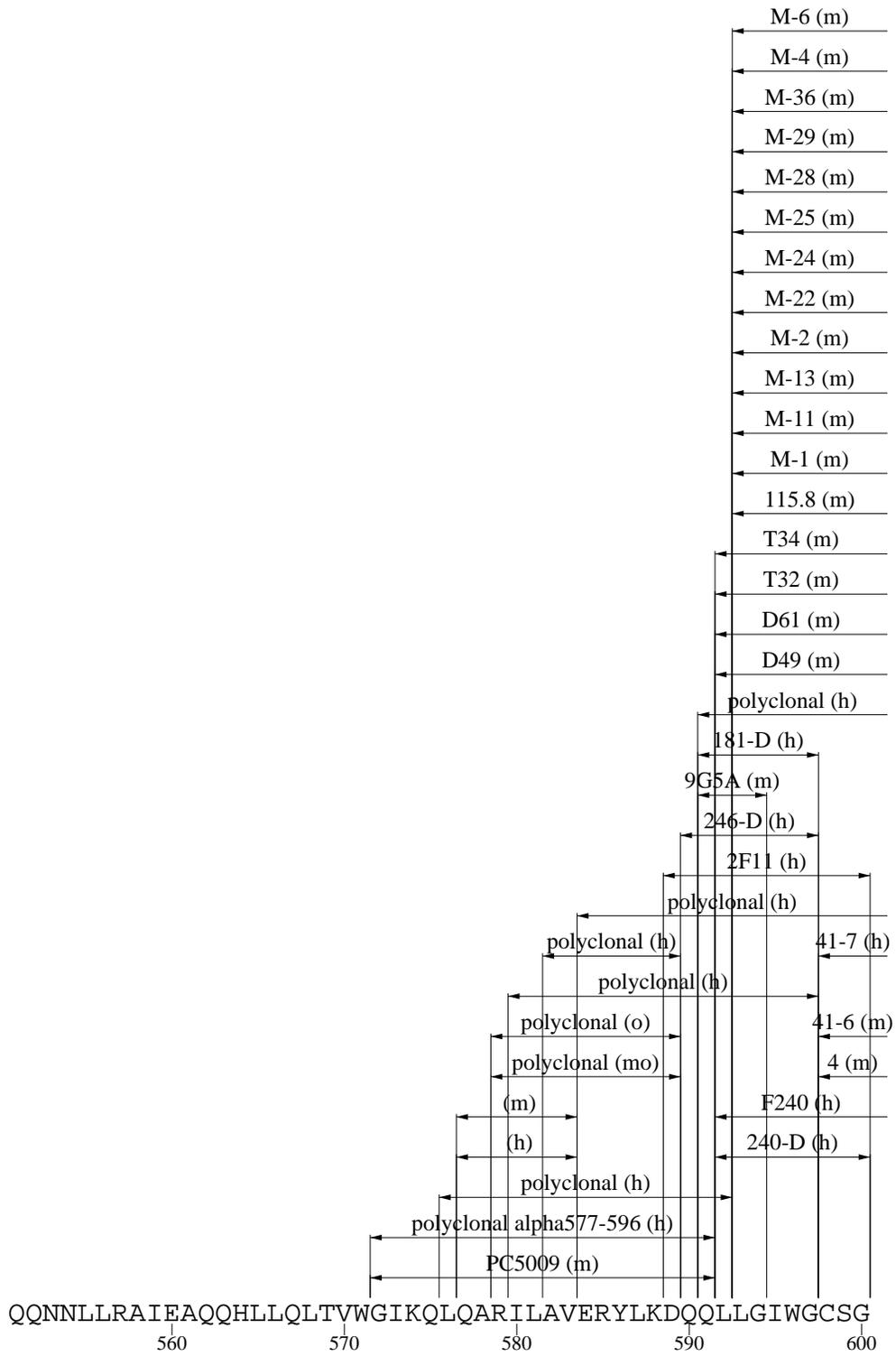


Figure 61: gp160 Ab Map aa 551-600 2/2



Figure 62: gp160 Ab Map aa 601–650 1/2

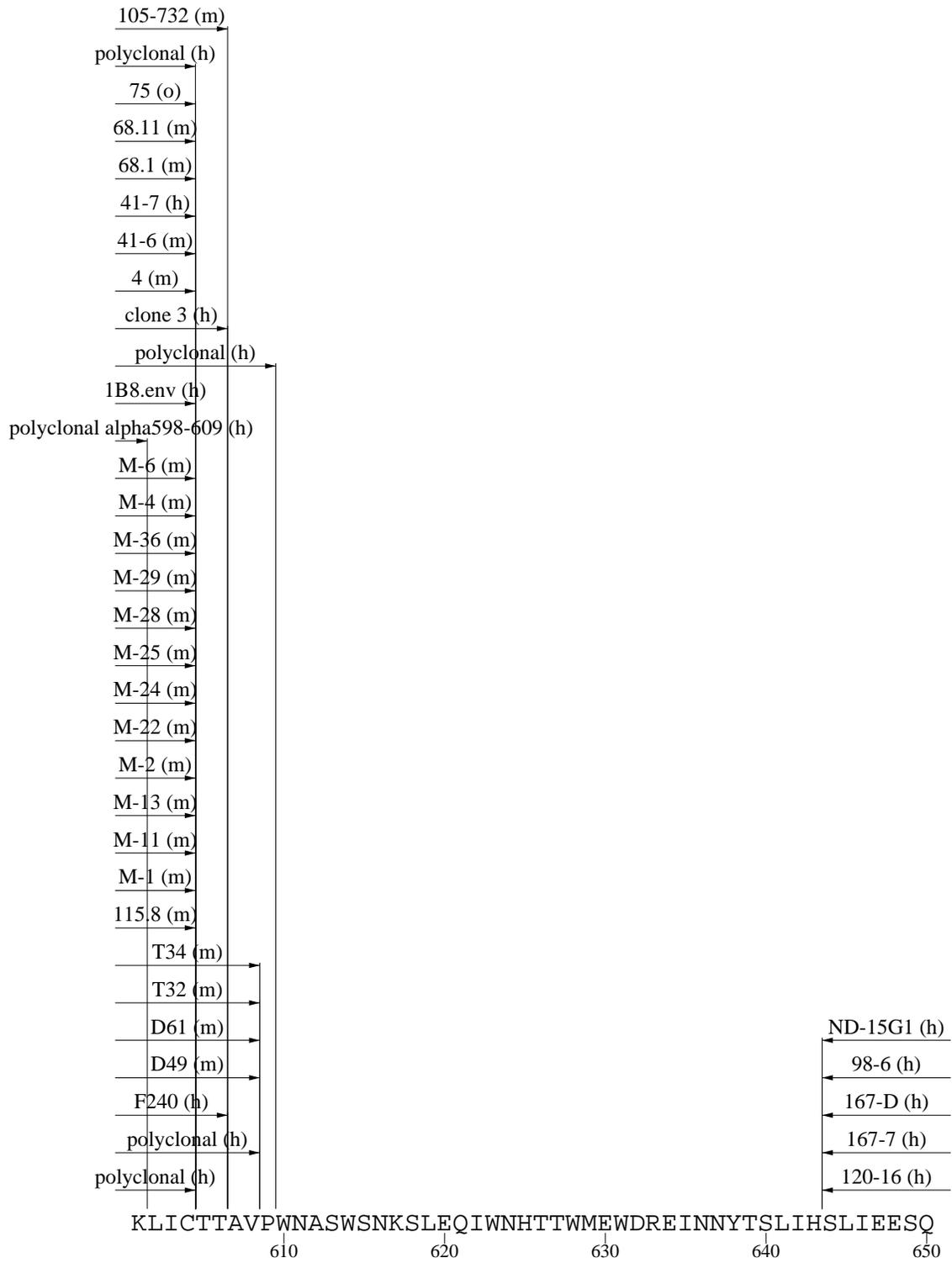


Figure 63: gp160 Ab Map aa 601–650 2/2

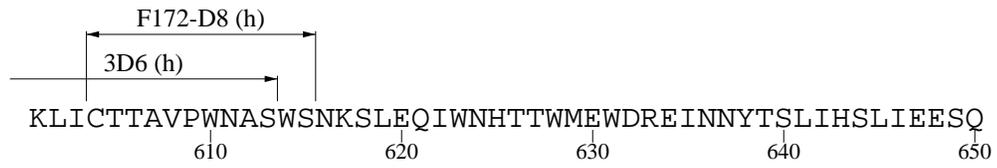


Figure 64: gp160 Ab Map aa 651–700

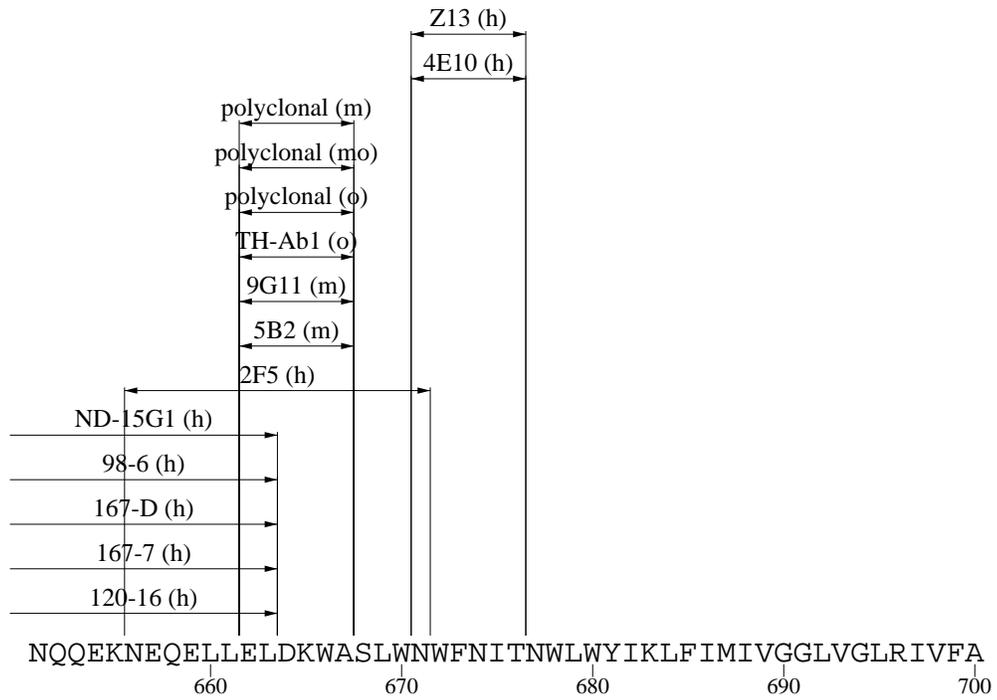


Figure 65: gp160 Ab Map aa 701–750

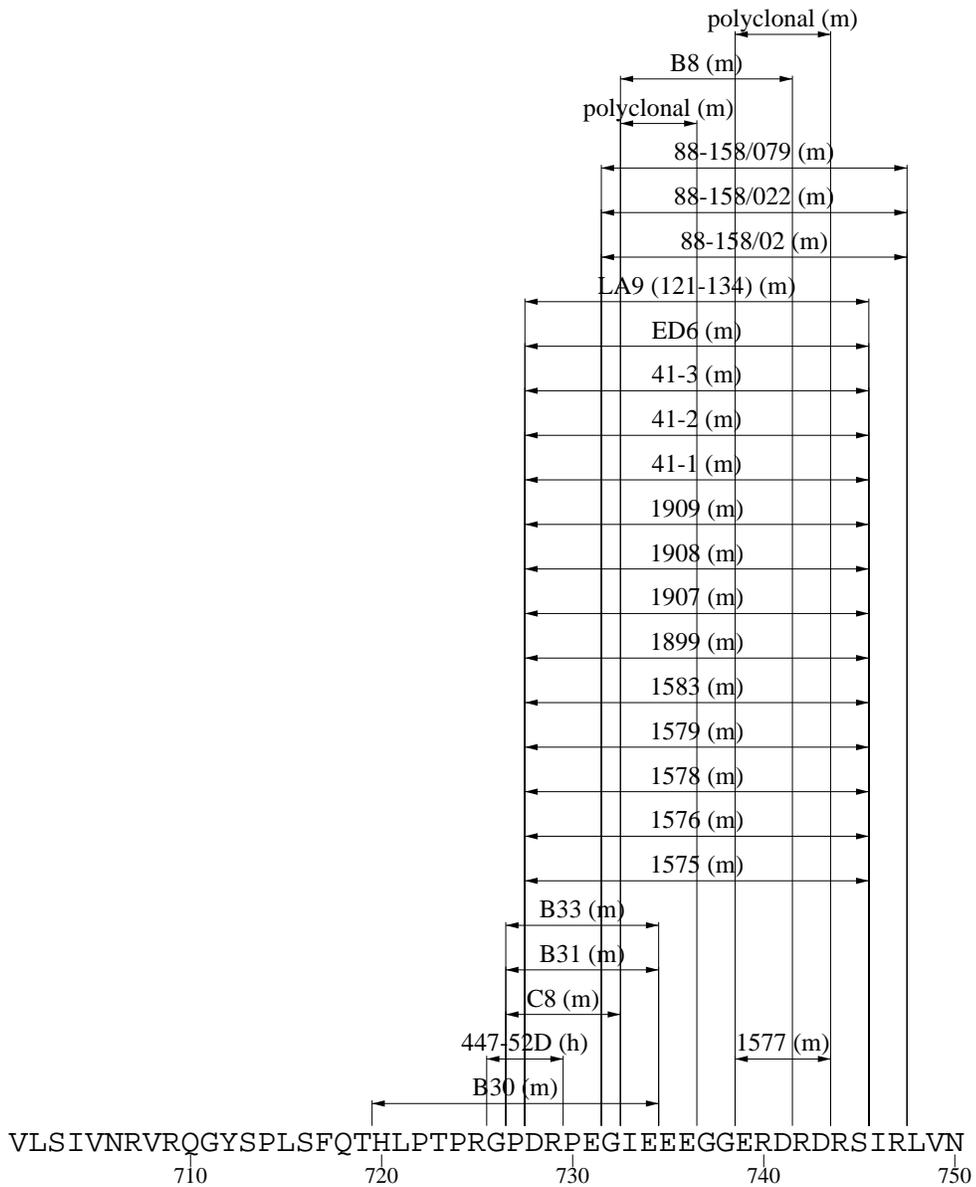


Figure 66: gp160 Ab Map aa 751–800

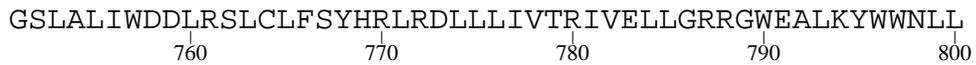


Figure 67: gp160 Ab Map aa 801–850



Figure 68: gp160 Ab Map aa 851–856



### 13 Nef Ab Epitope Map

Figure 69: Nef Ab Map aa 1–50

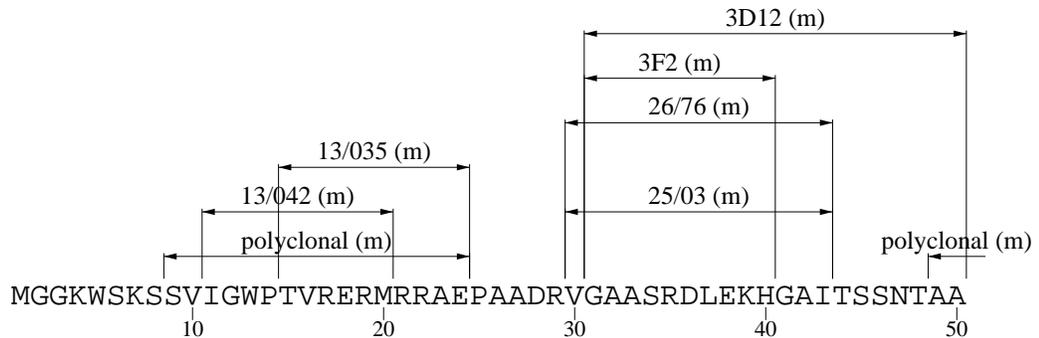


Figure 70: Nef Ab Map aa 51–100

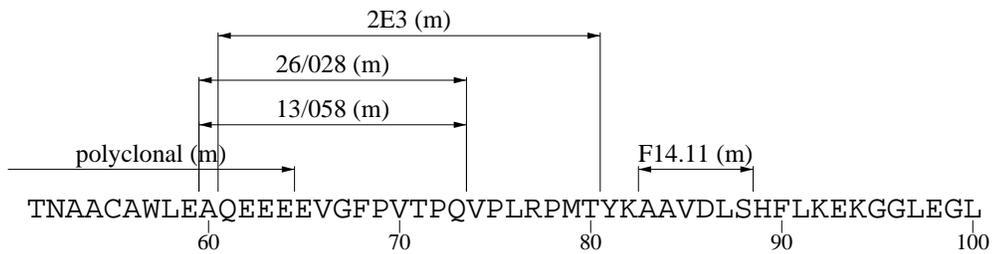


Figure 71: Nef Ab Map aa 101–150

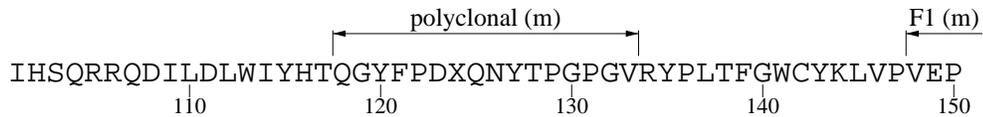


Figure 72: Nef Ab Map aa 151–200

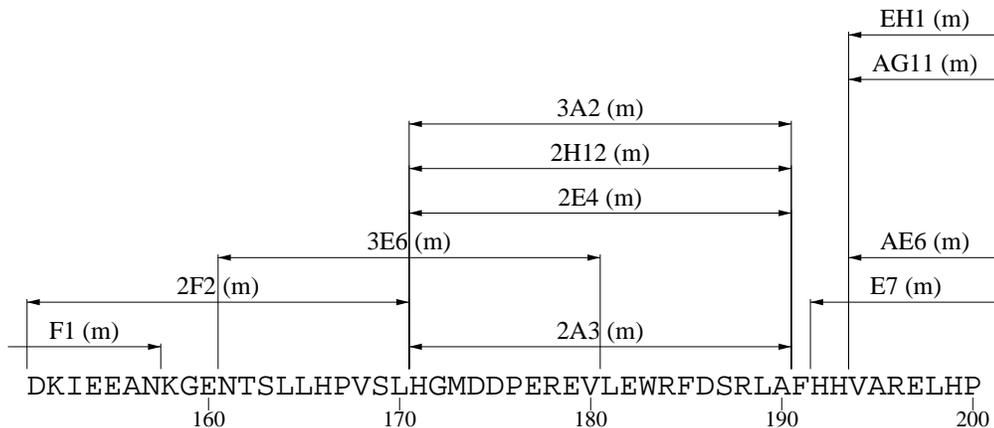


Figure 73: Nef Ab Map aa 201–206

