HCV Molecular Immunology: Maps of MAb Locations Plotted by Protein

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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 H77 clone. This map is meant to provide the relative location of epitopes on a given protein, but the H77 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.

1 Core Ab Epitope Map

Figure 1: Core Ab Map 1, aa 1-50

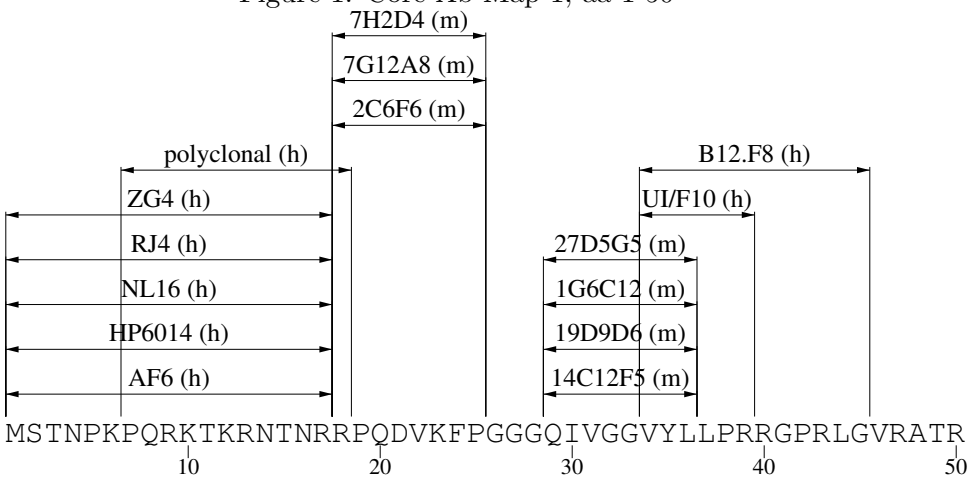


Figure 2: Core Ab Map 2, aa 51-100

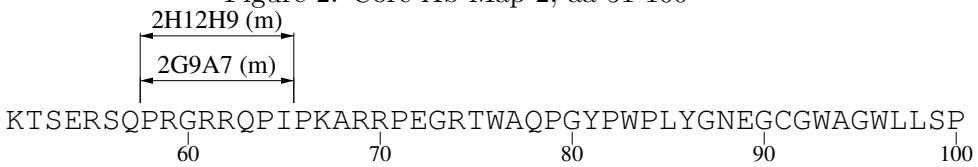


Figure 3: Core Ab Map 3, aa 101-150

Figure 4: Core Ab Map 4, aa 151-191

```
LAHGVRVLEDGVNYATGNLPGCSFSIFLLALLSCLTVPASA
          160       170       180       190
```

2 E1 Ab Epitope Map

Figure 5: E1 Ab Map 1, aa 192-241

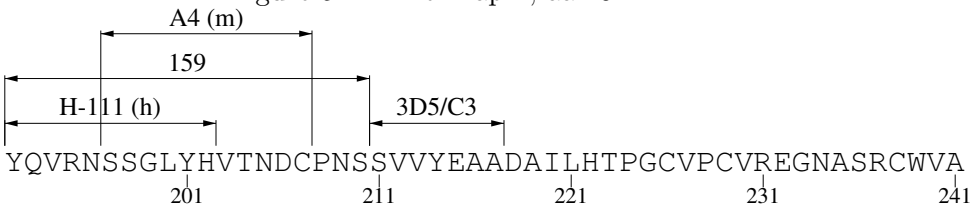


Figure 6: E1 Ab Map 2, aa 242-291

Figure 7: E1 Ab Map 3, aa 292-341

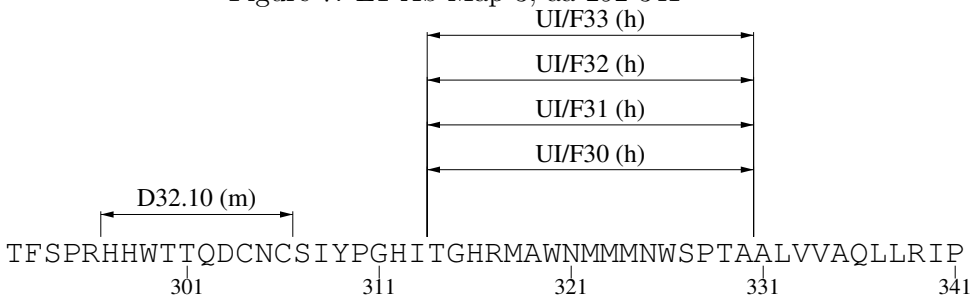


Figure 8: E1 Ab Map 4, aa 342-383

```
QAIMDMIAGAHWGVLAGIKYFSMVGNWAKVLVVLLLFAGVDA
          351       361       371       381
```

3 E2 Ab Epitope Map

Figure 9: E2 Ab Map 1, aa 384-433

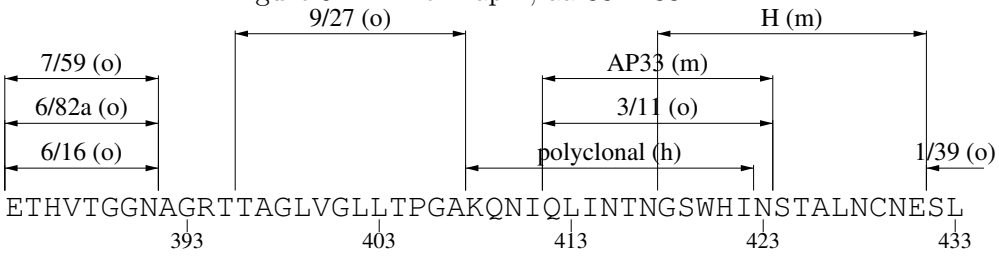


Figure 10: E2 Ab Map 2, aa 434-483

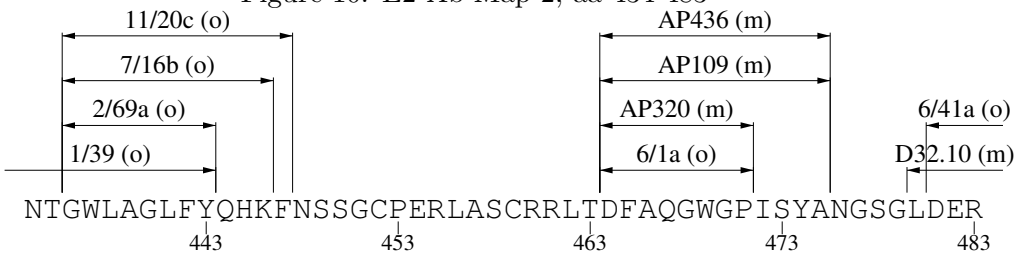


Figure 11: E2 Ab Map 3, aa 484-533

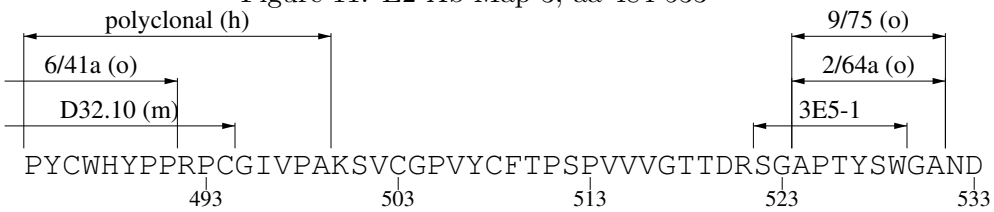


Figure 12: E2 Ab Map 4, aa 534-583

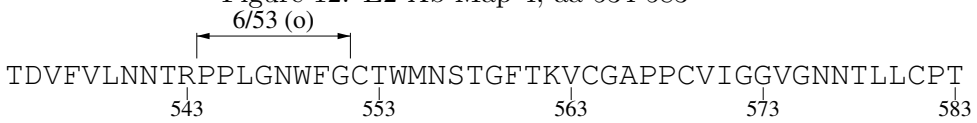


Figure 13: E2 Ab Map 5, aa 584-633

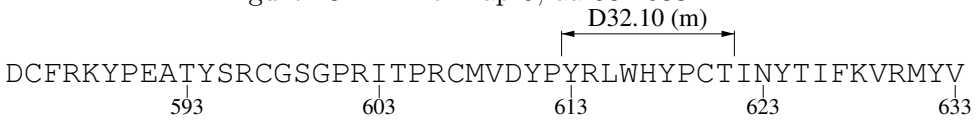


Figure 14: E2 Ab Map 6, aa 634-683

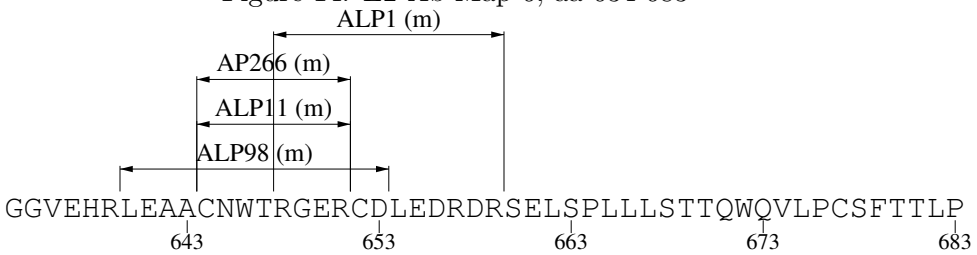
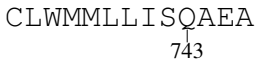


Figure 15: E2 Ab Map 7, aa 684-733

Figure 16: E2 Ab Map 8, aa 734-746



4 p7 Ab Epitope Map

Figure 17: p7 Ab Map 1, aa 747-796

```
ALENLVILNAASLAGTHGLVSFLVFFCFAWYLKGRWVPGAVYALYGMWPL
          756       766       776       786       796
```

Figure 18: p7 Ab Map 2, aa 797-809

```
LLLLLALPQRAYA
          806
```

5 NS2 Ab Epitope Map

Figure 19: NS2 Ab Map 1, aa 810-859

```
LDTEVAASCGGVVLVGLMALTLSPYYKRYISWCMWWLQYFLTRVEAQLHV
          819       829       839       849       859
```

Figure 20: NS2 Ab Map 2, aa 860-909

```
WVPPLNVRGGRDAVILLTCVVHPALVFDITKLLLAIFGPLWILQASLLKV
          869       879       889       899       909
```

Figure 21: NS2 Ab Map 3, aa 910-959

```
PYFVRVQGLLRICALARKIAGGHYVQMAIIKLGALTGTCVYNHLAPLRDW
          919       929       939       949       959
```

Figure 22: NS2 Ab Map 4, aa 960-1009

```
AHNGLRDLAVAVEPVVFSRMETKLITWGADTAACGDIINGLPVSARRGQE
          969       979       989       999       1009
```

Figure 23: NS2 Ab Map 5, aa 1010-1026

```
ILLGPADGMVSKGWRLL
         1019
```

6 NS3 Ab Epitope Map

Figure 24: NS3 Ab Map 1, aa 1027-1076

```
APITAYAQQTRGLLGCIITSLTGRDKNQVEGEVQIVSTATQTFLATCING
          1036      1046      1056      1066      1076
```

Figure 25: NS3 Ab Map 2, aa 1077-1126

```
VCWTVYHGAGTRTIASPKGPVIQTYTNVDQDLVGWPAPQGSRSLTPCTCG
          1086      1096      1106      1116      1126
```

Figure 26: NS3 Ab Map 3, aa 1127-1176

```
SSDLYLVTRHADVIPVRRRGDSRGSLLSPRPISYLKGSSGGPLLCPTGHA
          1136      1146      1156      1166      1176
```

Figure 27: NS3 Ab Map 4, aa 1177-1226

6L (m)

5I (m)

VGLFRAAVCTRGVAKAVDFIPVENLETTMRSPVFTDNSSPPAVPQSFQVA

1186 1196 1206 1216 1226

Figure 28: NS3 Ab Map 5, aa 1227-1276

HLHAPTGSGKSTKVPAAYAAKGYKVLVLNPSVAATLGFGAYMSKAHGVDP

1236 1246 1256 1266 1276

Figure 29: NS3 Ab Map 6, aa 1277-1326

NIRTGVRTITTGSPITYSTYGKFLADAGCSGGAYDIIICDECHSTDATSI

1286 1296 1306 1316 1326

Figure 30: NS3 Ab Map 7, aa 1327-1376

ZX10 (m)

SGIGTVLDQAETAGARLVVLATATPPGSVTVSHPNIEEVALSTTGEIPFY

1336 1346 1356 1366 1376

Figure 31: NS3 Ab Map 8, aa 1377-1426

ZX10 (m)

GKAIPLEVIKGGRHLIFCHSKKKCDELAAKLVALGINAVAYYRGLDVSVI

1386 1396 1406 1416 1426

Figure 32: NS3 Ab Map 9, aa 1427-1476

5D (m)

PTSGDVVVVSTDALMTGFTGDFDSVIDCNTCVTQTVDFSLDPTFTIETTT

1436 1446 1456 1466 1476

Figure 33: NS3 Ab Map 10, aa 1477-1526

LPQDAVSRTQRRGRTGRGKPGIYRFVAPGERPSGMFDSSVLCECYDAGCA

1486 1496 1506 1516 1526

Figure 34: NS3 Ab Map 11, aa 1527-1576

WYELTPAETTVRLRAYMNTPGLPVCQDHLGFWEGVFTGLTHIDAHFLSQT

1536 1546 1556 1566 1576

Figure 35: NS3 Ab Map 12, aa 1577-1626

KQSGENFPYLVAYQATVCARAQAPPPSWDQMRKCLIRLKPTLHGPTPLLY

1586 1596 1606 1616 1626

Figure 36: NS3 Ab Map 13, aa 1627-1657

RLGAVQNEVTLTHPITKYIMTCMSADLEVVT

1636 1646 1656

7 NS4a Ab Epitope Map

Figure 37: NS4a Ab Map 1, aa 1658-1707

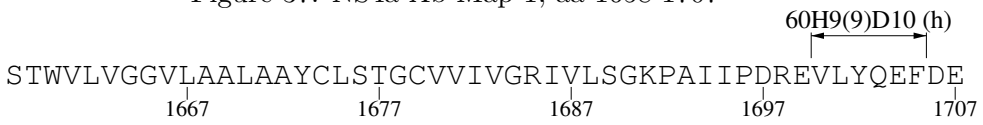


Figure 38: NS4a Ab Map 2, aa 1708-1711

8 NS4b Ab Epitope Map

Figure 39: NS4b Ab Map 1, aa 1712-1761

```
SQHLPYIEQGMMLAEQFKQKALGLLQTASRHAEVITPAVQTNWQKLEVFW
          1721      1731      1741      1751      1761
```

Figure 40: NS4b Ab Map 2, aa 1762-1811

```
AKHMWNFISGIQYLAGLSTLPGNPAIASLMAFTAAVTSPLTTGQTLLFNI
          1771      1781      1791      1801      1811
```

Figure 41: NS4b Ab Map 3, aa 1812-1861

```
LGGWVAAQLAAPGAATAFVGAGLAGAALDSVGLGKVLVDILAGYGAGVAG
          1821      1831      1841      1851      1861
```

Figure 42: NS4b Ab Map 4, aa 1862-1911

```
ALVAFKIMSGEVPSTEDLVNLLPAILSPGALAVGVVFASILRRRVGPGEG
          1871      1881      1891      1901      1911
```

Figure 43: NS4b Ab Map 5, aa 1912-1961

```
AVQWMNRLIAFASRGNHVSPTHYVPESDAAARVTAILSSLTVTQLLRRLH
          1921      1931      1941      1951      1961
```

Figure 44: NS4b Ab Map 6, aa 1962-1972

```
QWISSECTTPC
          1971
```

9 NS5a Ab Epitope Map

Figure 45: NS5a Ab Map 1, aa 1973-2022

```
SGSWLRDIWDWICEVLSDFKTWLKAKLMPQLPGIPFVSCQRGYRGVWRGD
          1982      1992      2002      2012      2022
```

Figure 46: NS5a Ab Map 2, aa 2023-2072

```
GIMHTRCHCGAEITGHVKNGTMRIVGPRTCKNMWSGTFFINAYTTGPCTP
          2032      2042      2052      2062      2072
```

Figure 47: NS5a Ab Map 3, aa 2073-2122

```
LPAPNYKFALWRVSAEEYVEIRRVGDFHYVSGMTTDNLKCPCQIPSPEFF
          2082      2092      2102      2112      2122
```

Figure 48: NS5a Ab Map 4, aa 2123-2172

```
TELDGVRLHRFAPPCKPLLREEVSFRVGLHEYPVGSQLPCEPEPDVAVLT
          2132      2142      2152      2162      2172
```

Figure 49: NS5a Ab Map 5, aa 2173-2222

```
SMLTDPSHITAEAAGRRLARGSPPSMASSSASQLSAPSLKATCTANHDSP
          2182      2192      2202      2212      2222
```

Figure 50: NS5a Ab Map 6, aa 2223-2272

```
DAELIEANLLWRQEMGGNITRVESENKVVILDSFDPLVAEEDEREVSVPA
          2232      2242      2252      2262      2272
```

Figure 51: NS5a Ab Map 7, aa 2273-2322

```
EILRKSRRFAPALPVWARPDYNPLLVETWKKPDYEPPVVHGCPLPPPRSP
          2282      2292      2302      2312      2322
```

Figure 52: NS5a Ab Map 8, aa 2323-2372

```
PVPPPRKKRTVVLTESTLPTALAELATKSFGSSSTSGITGDNTTTSSEPA
          2332      2342      2352      2362      2372
```

Figure 53: NS5a Ab Map 9, aa 2373-2420

```
PSGCPPDSDVESYSSMPPLEGEPGDPDLSDGSWSTVSSGADTEDVVCC
          2382      2392      2402      2412
```

10 NS5b Ab Epitope Map

Figure 54: NS5b Ab Map 1, aa 2421-2470

```
SMSYSWTGALVTPCAAEEQKLPINALSNSLLRHHNLVYSTTSRSACQRKK
          2430      2440      2450      2460      2470
```

Figure 55: NS5b Ab Map 2, aa 2471-2520

```
KVTFDRLQVLDSHYQDVLKEVKAAASKVKANLLSVEEACSLAPPHSAKSK
          2480      2490      2500      2510      2520
```

Figure 56: NS5b Ab Map 3, aa 2521-2570

```
FGYGAKDVRCHARKAVAHINSVWKDLLEDSVTPIDTTIMAKNEVFCVQPE
          2530      2540      2550      2560      2570
```

Figure 57: NS5b Ab Map 4, aa 2571-2620

```
KGGRKPARLIVFPDLGVRVCEKMALYDVVSKLPLAVMGSSYGFQYSPGQR
          2580      2590      2600      2610      2620
```

Figure 58: NS5b Ab Map 5, aa 2621-2670

```
VEFLVQAWKSKKTPMGLSYDTRCFDSTVTESDIRTEEAIYQCCDLDPQAR
          2630      2640      2650      2660      2670
```

Figure 59: NS5b Ab Map 6, aa 2671-2720

```
VAIKSLTERLYVGGPLTNSRGENCGYRRCRASRVLTTSCGNTLTRYIKAR
          2680      2690      2700      2710      2720
```

Figure 60: NS5b Ab Map 7, aa 2721-2770

```
AACRAAGLQDCTMLVCGDDLVVICESAGVQEDAASLRAFTEAMTRYSAPP
          2730      2740      2750      2760      2770
```

Figure 61: NS5b Ab Map 8, aa 2771-2820

```
                        5B-3B1 (m)
GDPPQPEYDLELITSCSSNVSVAHDGAGKRVYYLTRDPTTPLARAAWETA
          2780      2790      2800      2810      2820
```

Figure 62: NS5b Ab Map 9, aa 2821-2870

```
RHTPVNSWLGNIIMFAPTLWARMILMTHFFSVLIARDQLEQALNCEIYGA
          2830      2840      2850      2860      2870
```

Figure 63: NS5b Ab Map 10, aa 2871-2920

```
CYSIEPLDLPPIIQRLHGLSAFSLHSYSPGEINRVAACLRKLGVPPLRAW
          2880      2890      2900      2910      2920
```

Figure 64: NS5b Ab Map 11, aa 2921-2970

```
RHRAWSVRARLLARGGKAAICGKYLFNWAVRTKLKLTPITAAGRLDLSGW
          2930      2940      2950      2960      2970
```

Figure 65: NS5b Ab Map 12, aa 2971-3011

```
FTAGYSGGDIYHSVSHARPRWFWFCLLLLAAGVGIYLLPNR
          2980      2990      3000      3010
```