

SUPPLEMENTARY TABLE S2A. PATIENT DY: INTRAPATIENT MUTATIONS IN HIV gp120 SEQUENCES OF VARIOUS TISSUES AND ORGANS COMPARED TO THE LIVER

Position in HXB2 Residue in HXB2	101 C	135 K	*a					*a					*a					
			136 N	139 N	144 S	148 I	149 M	160 N	167 G	168 K	169 V	171 K	181 I	185 D	186 N	-	187 D	188 T
Liver	Y	R	N	.	K	.	.	.	.	K	L	T	.	.	.	.	.	.
Basal ganglia	C	G	T	.	N	.	.	.	.	Q	M	E	.	.	.	.	.	.
Threshold	Y	R	N	.	K	.	.	.	.	K	L	T	.	.	.	.	.	.
Liver	Y	R	.	.	K	K	L	K	N	K	L	.	V	G	S	.	D	N
Frontal lobe GM	C	G	.	.	N	T	M	N	D	Q	M	.	L	S	G	.	N	S
Threshold	Y	R	.	.	K	K	L	K	N	K	L	.	V	G	S	.	D	N
Liver	Y	R	.	.	K	.	.	.	.	K	L	T	.	.	.	.	.	.
Frontal lobe WM	C	G	.	.	N	.	.	.	.	Q	M	E	.	.	.	.	.	.
Threshold	Y	R	.	.	K	.	.	.	.	K	L	T	.	.	.	.	.	.
Liver	Y	R	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Lymph node	C	G	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Threshold	Y	R	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Liver	Y	.	.	N	K	.	.	K	.	K	L	.	.	.	S	.	.	.
Meninges	C	.	.	T	N	.	.	N	.	Q	M	.	.	.	G	.	.	.
Threshold	Y	.	.	N	K	.	.	K	.	K	L	.	.	.	S	.	.	.
Liver	Y	R	.	.	K	.	.	K	N	K	.	.	.	.	.	.	.	.
Spleen	C	G	.	.	N	.	.	N	D	Q	.	.	.	.	.	.	.	.
Threshold	Y	R	.	.	K	.	.	K	N	K	.	.	.	.	.	.	.	.
Liver	Y	R	.	.	K	.	.	.	.	K	L	T	.	.	S	S	.	.
Temporal cortex	C	G	.	.	N	.	.	.	.	Q	M	E	.	.	G	-	.	.
Threshold	Y	R	.	.	K	.	.	.	.	K	L	T	.	.	S	S	.	.

\*a=glycosite in HXB2.

Amino acid differences between gp120 in the liver and other tissues were included only if the amino acid was conserved at a frequency of 0.8 in the liver. Dots represent no difference between residues of the liver and the other tissue. Residues not shown are conserved in all tissues. Dashes represent insertions and/or deletions relative to HXB2.

Sequence data were originally reported in Lamers *et al.*<sup>18</sup>

SUPPLEMENTARY TABLE S2B. PATIENT DY: INTRAPATIENT MUTATIONS IN HIV gp120 SEQUENCES OF VARIOUS TISSUES AND ORGANS COMPARED TO THE LIVER

Position in HXB2 Residue in HXB2	*ad			211	236	240	250	278	*c	*d	324	336	337	363	*g	379	380	*h
	192	197	208						281	309					367			
	K	N	V	E	T	T	G	T	A	I	G	A	K	Q	G	G	G	N
Liver	K	.	.	K	I	.	R	.	L	I	R	.	.	.	E	R	E	K
Basal ganglia	R	.	.	E	M	.	G	.	V	M	G	.	.	.	G	A	G	N
Threshold	K	.	.	K	I	.	R	.	L	I	R	.	.	.	E	R	E	K
Liver	.	.	I	K	I	.	R	T	L	I	R	.	.	R	E	R	E	K
Frontal lobe GM	.	.	V	E	M	.	G	M	I	M	G	.	.	H	G	G	G	N
Threshold	.	.	I	K	I	.	R	T	L	I	R	.	.	R	E	R	E	K
Liver	K	N	.	K	I	.	R	.	L	I	R	.	.	.	E	R	E	K
Frontal lobe WM	R	S	.	E	M	.	G	.	V	M	G	.	.	.	G	A	G	N
Threshold	K	N	.	K	I	.	R	.	L	I	R	.	.	.	E	R	E	K
Liver	.	.	.	K	I	.	R	.	.	I	R	.	.	.	E	R	E	K
Lymph node	.	.	.	E	M	.	G	.	.	M	G	.	.	.	G	G	G	N
Threshold	.	.	.	K	I	.	R	.	.	I	R	.	.	.	E	R	E	K
Liver	K	.	.	K	I	K	R	.	L	I	R	.	.	.	E	R	E	K
Meninges	R	.	.	E	T	N	G	.	I	M	G	.	.	.	G	G	G	N
Threshold	K	.	.	K	I	K	R	.	L	I	R	.	.	.	E	R	E	K
Liver	.	.	.	K	I	K	R	.	L	I	R	.	.	.	E	R	E	K
Spleen	.	.	.	E	T	N	G	.	I	M	G	.	.	.	G	G	G	N
Threshold	.	.	.	K	I	K	R	.	L	I	R	.	.	.	E	R	E	K
Liver	K	N	.	K	I	.	R	.	L	I	R	R	E	.	E	R	E	K
Temporal cortex	R	S	.	E	T	.	G	.	V	M	G	K	D	.	G	A	G	N
Threshold	K	N	.	K	I	.	R	.	L	I	R	R	E	.	E	R	E	K

\*a=glycosite in HXB2, \*c=CD4 contact residue, \*d=coreceptor binding site, \*g=CD4 binding loop: SSGGDPEIVTH, \*h=lectin DC-SIGN binding site, glycosite, monoclonal Ab 2G12 glycosylation binding site.

Amino acid differences between gp120 in the liver and other tissues only were included if the amino acid was conserved at a frequency of 0.8 in the liver. Dots represent no difference between residues of the liver and the other tissue. Residues not shown are conserved in all tissues. Dashes represent insertions and/or deletions relative to HXB2.

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SUPPLEMENTARY TABLE S2C. PATIENT DY: INTRAPATIENT MUTATIONS IN HIV gp120 SEQUENCES OF VARIOUS TISSUES AND ORGANS COMPARED TO THE LIVER

<i>Position in HXB2</i>	396	404	410	* <sub>c</sub> 429	* <sub>c</sub> 431	* <sub>c</sub> 459	* <sub>c</sub> 461	462	* <sub>a</sub> 463	464	465	* <sub>c</sub> 473	* <sub>c</sub> 474	* <sub>c</sub> 476	489	* <sub>i</sub> 495	507
<i>Residue in HXB2</i>	F	G	G	K	G	G	S	N	N	E	S	G	D	R	V	G	Q
Liver	.	R	.	K	R	S	K	.	E	D	T	R	D	K	.	R	Q
Basal ganglia	.	G	.	E	G	G	E	.	G	N	I	G	N	R	.	G	R
Threshold	.	R	.	K	R	S	K	.	E	D	T	R	D	K	.	R	Q
Liver	K	R	R	K	R	S	K	.	E	D	.	R	D	K	I	R	.
Frontal lobe GM	N	G	K	A	G	G	E	.	G	N	.	G	N	R	V	G	.
Threshold	K	R	R	K	R	S	K	.	E	D	.	R	D	K	I	R	.
Liver	.	R	.	K	R	S	K	N	E	D	.	R	D	K	.	R	Q
Frontal lobe WM	.	G	.	E	G	G	E	D	G	N	.	G	N	R	.	G	R
Threshold	.	R	.	K	R	S	K	N	E	D	.	R	D	K	.	R	Q
Liver	K	R	.	.	R	S	K	.	E	.	.	R	D	K	.	R	.
Lymph node	N	G	.	.	G	G	E	.	G	.	.	G	N	R	.	G	.
Threshold	K	R	.	.	R	S	K	.	E	.	.	R	D	K	.	R	.
Liver	.	R	.	K	R	S	K	.	E	.	.	R	D	K	.	R	.
Meninges	.	G	.	E	G	G	E	.	G	.	.	G	N	R	.	G	.
Threshold	.	R	.	K	R	S	K	.	E	.	.	R	D	K	.	R	.
Liver	K	R	.	.	R	S	K	.	E	.	.	R	.	K	.	R	.
Spleen	N	G	.	.	G	G	E	.	G	.	.	G	.	R	.	G	.
Threshold	K	R	.	.	R	S	K	.	E	.	.	R	.	K	.	R	.
Liver	.	R	.	K	R	S	K	.	E	D	.	R	D	K	.	R	.
Temporal cortex	.	G	.	E	G	G	E	.	G	N	.	G	N	R	.	G	.
Threshold	.	R	.	K	R	S	K	.	E	D	.	R	D	K	.	R	.

\*a=glycosite in HXB2, \*c=CD4 contact residue, \*i=gp120 interface contact with gp41.

Amino acid differences between gp120 in the liver and other tissues were included only if the amino acid was conserved at a frequency of 0.8 in the liver. Dots represent no difference between residues of the liver and the other tissue. Residues not shown are conserved in all tissues. Dashes represent insertions and/or deletions relative to HXB2.

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SUPPLEMENTARY TABLE S3. PATIENT AZ: INTRAPATIENT MUTATIONS IN HIV GP120 SEQUENCES OF VARIOUS TISSUES AND ORGANS COMPARED TO THE LIVER

<i>Position in HXB2</i>	115	130	134	135	<sup>*a</sup>	<sup>*a</sup>	140	<sup>*a</sup>	<sup>*a</sup>	<sup>*a</sup>	145	-	-	-	-	-
<i>Residue in HXB2</i>	S	K	L	K	N	D	T	N	S	S	G	-	-	-	-	-
Liver	S	D	V	C	N	T	T	N	C	S	N	-	-	.	T	S
Lymph node	G	N	E	W	D	K	A	K	S	T	T	P	S	.	S	I
Threshold	S	D	V	C	N	T	T	N	C	S	N	-	-	.	T	S
Liver	S	D	V	C	N	T	T	N	C	S	N	-	-	.	T	S
Frontal cortex	G	N	E	W	D	K	A	K	S	T	T	P	S	.	S	I
Threshold	S	D	V	C	N	T	T	N	C	S	N	-	-	.	T	S
Liver	S	D	V	C	N	T	T	N	C	S	N	-	-	G	.	-
Meninges	G	N	E	W	D	K	A	K	S	T	T	P	S	T	.	I
Threshold	S	D	V	C	N	T	T	N	C	S	N	-	-	G	.	-

  

<i>Position in HXB2</i>	146	147	149	150	151	164	165	<sup>*d</sup>	173	175	<sup>*b</sup>	185	-	-	<sup>*d</sup>	240
<i>Residue in HXB2</i>	R	M	M	E	K	S	I	R	Y	F	I	D	-	-	V	T
Liver	W	K	A	E	K	V	V	G	Q	F	V	K	-	-	V	K
Lymph node	G	G	K	D	I	T	A	S	E	L	I	D	N	S	T	R
Threshold	W	K	A	E	K	V	V	G	Q	F	V	K	-	-	V	K
Liver	W	K	A	E	K	V	V	G	Q	F	V	K	-	-	V	K
Frontal cortex	G	G	K	D	I	T	A	S	E	L	I	D	N	S	T	R
Threshold	W	K	A	E	K	V	V	G	Q	F	V	K	-	-	V	K
Liver	W	K	A	E	K	V	V	G	Q	F	V	K	-	-	V	.
Meninges	G	G	K	D	I	T	A	N	E	L	I	D	N	S	T	.
Threshold	W	K	A	E	K	V	V	G	Q	F	V	K	-	-	V	.

  

<i>Position in HXB2</i>	<sup>*i</sup>	252	268	343	345	350	353	354	-	355	<sup>*a</sup>	360	<sup>*a</sup>	<sup>*a</sup>	446	<sup>*a</sup>	464	488
<i>Residue in HXB2</i>	R	R	E	K	I	R	F	G	-	N	N	I	N	T	S	E	E	V
Liver	.	.	E	I	G	E	Q	F	K	N	A	.	I	.	.	.	I	I
Lymph node	.	.	G	V	R	-	-	-	-	F	I	.	T	.	.	.	V	V
Threshold	.	.	E	I	G	E	Q	F	K	N	A	.	I	.	.	.	I	I
Liver	R	E	E	I	G	E	Q	F	K	N	A	.	I	S	S	S	I	I
Frontal cortex	K	G	G	V	R	-	-	-	-	F	I	.	T	A	N	N	V	V
Threshold	R	E	E	I	G	E	Q	F	K	N	A	.	I	S	S	S	I	I
Liver	.	.	E	I	G	E	Q	F	K	N	A	G	I	.	.	.	I	I
Meninges	.	.	G	V	R	-	-	-	-	F	I	D	T	.	.	.	V	V
Threshold	.	.	E	I	G	E	Q	F	K	N	A	G	I	.	.	.	I	I

<sup>\*a</sup>=glycosite in HXB2, <sup>\*b</sup>=LDI/LDV tripeptide in V2 binds integrin  $\alpha_4\beta_7$ , <sup>\*d</sup>=coreceptor binding site, <sup>\*i</sup>=gp120 interface contact with gp41.

Amino acid differences between gp120 in the liver and other tissues were included only if the amino acid was conserved at a frequency of 0.8 in the liver. Dots represent no difference between residues of the liver and the other tissue. Residues not shown are conserved in all tissues. Dashes represent insertions and/or deletions relative to HXB2.

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SUPPLEMENTARY TABLE S4A. PATIENT AM: INPATIENT MUTATIONS IN HIV gp120 SEQUENCES OF VARIOUS TISSUES AND ORGANS COMPARED TO THE LIVER

<i>Position in HXB2</i>	130	132	<sup>*a</sup> 136	<sup>*a</sup> 137	139	<sup>*a</sup> 141	<sup>*a</sup> 142	-	144	145	-	-	-	146	147	148	151	152	175
<i>Residue in HXB2</i>	K	T	N	D	N	N	S	-	S	G	-	-	-	R	M	I	K	G	F
Liver	D	T	A	I	K	C	S	T	G	.	T	N	H	T	C	.	M	E	.
Diaphragm	N	S	V	T	A	S	T	-	V	.	S	G	Q	L	N	.	I	G	.
Threshold	D	T	A	I	K	C	S	T	G	.	T	N	H	T	C	.	M	E	.
Liver	D	.	.	.	.	.	.	.	.	.	T	.	H	T	.	N	.	.	V
Kidney	E	.	.	.	.	.	.	.	.	.	N	.	Q	N	.	S	.	.	L
Threshold	D	.	.	.	.	.	.	.	.	.	T	.	H	T	.	N	.	.	V
Liver	D	.	.	.	.	.	.	.	.	.	T	.	.	T	.	N	.	.	V
Left lymph node	E	.	.	.	.	.	.	.	.	.	N	.	.	N	.	S	.	.	L
Threshold	D	.	.	.	.	.	.	.	.	.	T	.	.	T	.	N	.	.	V
Liver	.	T	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Right lymph node	.	I	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Threshold	.	T	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Liver	D	.	.	.	.	.	.	.	.	.	T	.	.	T	.	N	.	.	V
Liver tumor (1)	E	.	.	.	.	.	.	.	.	.	N	.	.	N	.	S	.	.	L
Threshold	D	.	.	.	.	.	.	.	.	.	T	.	.	T	.	N	.	.	V
Liver	D	.	.	.	.	.	.	.	G	.	T	.	.	T	.	N	.	.	V
Liver tumor (2)	E	.	.	.	.	.	.	.	R	.	N	.	.	N	.	S	.	.	L
Threshold	D	.	.	.	.	.	.	.	G	.	T	.	.	T	.	N	.	.	V
Liver	.	T	.	.	.	.	.	.	.	.	.	.	H	.	.	N	.	.	.
Prostate	.	I	.	.	.	.	.	.	.	.	.	.	Q	.	.	S	.	.	.
Threshold	.	T	.	.	.	.	.	.	.	.	.	.	H	.	.	N	.	.	.
Liver	D	.	.	.	.	.	.	.	.	.	T	.	.	T	.	N	.	.	V
Spleen	E	.	.	.	.	.	.	.	.	.	N	.	.	N	.	S	.	.	L
Threshold	D	.	.	.	.	.	.	.	.	.	T	.	.	T	.	N	.	.	V
Liver	D	.	.	.	.	.	.	.	.	.	T	.	.	T	.	N	.	.	V
Stomach lymphoma	E	.	.	.	.	.	.	.	.	.	N	.	.	N	.	S	.	.	L
Threshold	D	.	.	.	.	.	.	.	.	.	T	.	.	T	.	N	.	.	V

\*a=glycosite in HXB2.

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SUPPLEMENTARY TABLE S4B. PATIENT AM: INTRAPATIENT MUTATIONS IN HIV GP120 SEQUENCES OF VARIOUS TISSUES AND ORGANS COMPARED TO THE LIVER

<i>Position in HXB2</i>	177	178	<sup>*b</sup>	<sup>*b</sup>		<sup>*a</sup>	-	-	-	<sup>*a</sup>	189	190	-	-	-	-	-	191	
<i>Residue in HXB2</i>	Y	K	L	I	D	D	-	-	-	T	T	S	-	-	-	-	-	Y	
Liver	.	K	P	L	N	N	.	Y	V	.	Q	.	.	.	.	.	.	R	.
Diaphragm	.	E	L	I	E	D	.	K	-	.	N	.	.	.	.	.	.	-	.
Threshold	.	K	P	L	N	N	.	Y	V	.	Q	.	.	.	.	.	.	R	.
Liver	H	.	P	L	N	N	K	.	V	.	Q	.	-	-	-	-	-	.	.
Kidney	Y	.	I	I	D	D	E	.	-	.	S	.	I	N	N	K	T	.	.
Threshold	H	.	P	L	N	N	K	.	V	.	Q	.	-	-	-	-	-	.	.
Liver	H	.	P	L	N	N	K	.	V	.	Q	.	-	-	-	-	-	.	.
Left lymph node	Y	.	I	I	D	D	E	.	-	.	S	.	I	N	N	K	T	.	.
Threshold	H	.	P	L	N	N	K	.	V	.	Q	.	-	-	-	-	-	.	.
Liver	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Right lymph node	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Threshold	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Liver	H	.	P	L	N	N	K	.	V	.	Q	.	-	-	-	-	-	.	.
Liver tumor (1)	Y	.	I	I	D	D	E	.	-	.	S	.	I	N	N	K	T	.	.
Threshold	H	.	P	L	N	N	K	.	V	.	Q	.	-	-	-	-	-	.	.
Liver	H	.	P	L	N	N	K	.	V	.	Q	.	-	-	-	-	-	.	.
Liver tumor (2)	Y	.	I	I	D	D	E	.	-	.	S	.	I	N	N	K	T	.	.
Threshold	H	.	P	L	N	N	K	.	V	.	Q	.	-	-	-	-	-	.	.
Liver	.	.	.	.	.	.	.	.	.	.	Q	.	.	.	.	.	.	.	.
Prostate	.	.	.	.	.	.	.	.	.	.	S	.	.	.	.	.	.	.	.
Threshold	.	.	.	.	.	.	.	.	.	.	Q	.	.	.	.	.	.	.	.
Liver	H	.	P	L	N	N	.	.	V	.	.	.	.	.	.	.	.	.	.
Spleen	Y	.	I	I	D	D	.	.	-	.	.	.	.	.	.	.	.	.	.
Threshold	H	.	P	L	N	N	.	.	V	.	.	.	.	.	.	.	.	.	.
Liver	H	.	P	L	N	N	K	.	V	.	Q	.	-	-	-	-	-	.	.
Stomach lymphoma	Y	.	I	I	D	D	E	.	-	.	S	.	I	N	N	K	T	.	.
Threshold	H	.	P	L	N	N	K	.	V	.	Q	.	-	-	-	-	-	.	.

\*a= glycosite in HXB2, \*b=LDI/LDV tripeptide in V2 binds integrin  $\alpha_4\beta_7$ .

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		*c	*a	*a	*a		*d	*d		*e	*d	*d		*f	*f	*f		
Position in HXB2	194	198	289	290	291	305	306	307	308	311	312	318	322	328	332	333	334	336
Residue in HXB2	T	T	N	T	S	K	R	I	R	R	G	V	K	Q	N	I	S	A
Liver	I	S	.	.	.	K	G	.	R	.	G	.	K	Q	N	L	S	A
Diaphragm	R	T	.	.	.	R	S	.	H	.	A	.	E	K	K	I	N	T
Threshold	I	S	.	.	.	K	G	.	R	.	G	.	K	Q	N	L	S	A
Liver	.	S	N	.	S	.	G	.	R	.	.	.	K	.	.	L	.	.
Kidney	.	T	D	.	F	.	S	.	H	.	.	.	E	.	.	I	.	.
Threshold	.	S	N	.	S	.	G	.	R	.	.	.	K	.	.	L	.	.
Liver	.	S	N	.	S	.	G	.	R	.	.	.	K	.	.	L	.	.
Left lymph node	.	T	D	.	F	.	S	.	H	.	.	.	E	.	.	I	.	.
Threshold	.	S	N	.	S	.	G	.	R	.	.	.	K	.	.	L	.	.
Liver	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Right lymph node	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Threshold	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Liver	.	S	N	.	S	.	G	.	R	.	.	.	K	.	.	L	.	.
Liver tumor (1)	.	T	D	.	F	.	S	.	H	.	.	.	E	.	.	I	.	.
Threshold	.	S	N	.	S	.	G	.	R	.	.	.	K	.	.	L	.	.
Liver	.	S	N	.	S	.	G	.	R	.	.	.	K	.	.	L	.	.
Liver tumor (2)	.	T	D	.	F	.	S	.	H	.	.	.	E	.	.	I	.	.
Threshold	.	S	N	.	S	.	G	.	R	.	.	.	K	.	.	L	.	.
Liver	.	.	.	.	.	.	.	.	.	I	.	Y	.	.	.	.	.	.
Prostate	.	.	.	.	.	.	.	.	.	M	.	I	.	.	.	.	.	.
Threshold	.	.	.	.	.	.	.	.	.	I	.	Y	.	.	.	.	.	.
Liver	.	S	N	.	S	.	G	.	R	.	.	.	K	.	.	L	.	.
Spleen	.	T	D	.	F	.	S	.	H	.	.	.	E	.	.	I	.	.
Threshold	.	S	N	.	S	.	G	.	R	.	.	.	K	.	.	L	.	.
Liver	.	S	N	.	S	.	G	.	R	.	.	.	K	.	.	L	.	.
Stomach lymphoma	.	T	D	.	F	.	S	.	H	.	.	.	E	.	.	I	.	.
Threshold	.	S	N	.	S	.	G	.	R	.	.	.	K	.	.	L	.	.

\*a=glycosite in HXB2, \*c=CD4 contact residue, \*d=coreceptor binding site, \*e=GPGR tip of V3 loop, neutralizing antibody (447-52D) binding, coreceptor binding site, \*f=monoclonal Ab 2G12 glycosylation binding site.

Amino acid differences between gp120 in the liver and other tissues were included only if the amino acid was conserved at a frequency of 0.8 in the liver. Dots represent no difference between residues of the liver and the other tissue. Residues not shown are conserved in all tissues. Dashes represent insertions and/or deletions relative to HXB2.

Sequence data were originally reported in Lamers *et al.*<sup>18</sup>

SUPPLEMENTARY TABLE S4D. PATIENT AM: INTRAPATIENT MUTATIONS IN HIV GP120 SEQUENCES OF VARIOUS TISSUES AND ORGANS COMPARED TO THE LIVER

<i>Position in HXB2</i>	340	343	346	347	359	360	362	<sup>*g</sup>	<sup>*h</sup>			<sup>*a</sup>		<sup>*d</sup>	<sup>*c</sup>		
<i>Residue in HXB2</i>	N	K	A	S	I	I	K	T	N	T	F	N	T	S	S	I	V
Liver	T	T	V	K	.	I	K	.	N	S	K	T	.	S	S	.	.
Diaphragm	N	K	A	A	.	V	N	.	D	A	S	I	.	K	I	.	.
Threshold	T	T	V	K	.	I	K	.	N	S	K	T	.	S	S	.	.
Liver	T	T	.	K	I	.	K	R	.	.	K	T	T	.	.	T	I
Kidney	N	K	.	Q	-	.	T	M	.	.	N	S	I	.	.	I	M
Threshold	T	T	.	K	I	.	K	R	.	.	K	T	T	.	.	T	I
Liver	T	T	.	K	I	.	K	R	.	.	K	T	T	.	.	T	.
Left lymph node	N	K	.	Q	-	.	T	M	.	.	N	N	I	.	.	I	.
Threshold	T	T	.	K	I	.	K	R	.	.	K	T	T	.	.	T	.
Liver	.	.	.	.	.	.	.	.	.	.	.	T	.	.	.	.	.
Right lymph node	.	.	.	.	.	.	.	.	.	.	.	I	.	.	.	.	.
Threshold	.	.	.	.	.	.	.	.	.	.	.	T	.	.	.	.	.
Liver	T	T	.	K	I	.	K	R	.	.	K	T	T	.	.	T	.
Liver tumor (1)	N	K	.	Q	-	.	T	M	.	.	N	N	I	.	.	I	.
Threshold	T	T	.	K	I	.	K	R	.	.	K	T	T	.	.	T	.
Liver	T	T	.	K	I	.	K	R	.	.	K	T	T	.	.	T	.
Liver tumor (2)	N	K	.	Q	-	.	T	M	.	.	N	N	I	.	.	I	.
Threshold	T	T	.	K	I	.	K	R	.	.	K	T	T	.	.	T	.
Liver	.	.	.	.	.	.	.	.	.	.	.	T	.	.	.	.	.
Prostate	.	.	.	.	.	.	.	.	.	.	.	I	.	.	.	.	.
Threshold	.	.	.	.	.	.	.	.	.	.	.	T	.	.	.	.	.
Liver	T	T	.	K	.	.	K	R	.	.	K	T	T	.	.	T	.
Spleen	N	K	.	Q	.	.	T	M	.	.	N	N	I	.	.	I	.
Threshold	T	T	.	K	.	.	K	R	.	.	K	T	T	.	.	T	.
Liver	T	T	.	K	I	.	K	R	.	.	K	T	T	.	.	T	.
Stomach lymphoma	N	K	.	Q	-	.	T	M	.	.	N	N	I	.	.	I	.
Threshold	T	T	.	K	I	.	K	R	.	.	K	T	T	.	.	T	.

<sup>\*a</sup>=glycosite in HXB2, <sup>\*c</sup>=CD4 contact residue, <sup>\*d</sup>=coreceptor (CCR5/CXCR4) binding site, <sup>\*g</sup>=CD4 binding loop: SSGGDPEIVTH, <sup>\*h</sup>=lectin DC-SIGN binding site (N386-T388), glycosite, monoclonal Ab 2G12 glycosylation binding site (N386-T388).

Amino acid differences between gp120 in the liver and other tissues were included only if the amino acid was conserved at a frequency of 0.8 in the liver. Dots represent no difference between residues of the liver and the other tissue. Residues not shown are conserved in all tissues. Dashes represent insertions and/or deletions relative to HXB2.

Sequence data were originally reported in Lamers *et al.*<sup>18</sup>