

Protein Alignment Summary Table (Pol)

Name(s)	Locus	Accession No.	First Author	Reference
Q23-CxC-CG	HIVQ2317	AF004885	Poss M	<i>J Virol</i> 72 (10) 8240-51 (1998)
SE7253	ASOSE7253	AF09670	Carr JK	Unpublished (1998)
SE8538	ATZSE8538	AF09669	Carr JK	Unpublished (1998)
SE8891	AUGSE8891	AF09673	Carr JK	Unpublished (1998)
92UG037	H92UG037	U51190	Gao F	<i>J Virol</i> 70 (3) 151-1657 (1996)
U455 U455A	HIVU455A	M2320	Oram JD	<i>ARHR</i> 6 (9) 1073-1078 (1990)
C18MBC	HIVIC18MBC	U37270	Deacon NJ	<i>Science</i> 270 (5238) 988-991 (1995)
CNRL42	HCNRL42CG	U71182	Graf M	<i>ARHR</i> 14 (3) 285-288 (1998)
D31	HIVID31	U4309	Kreutz R	<i>ARHR</i> 8 (9) 119-1629 (1992)
HXB2 HXB2CG	HIVHXB2R	K03455	Wong-Staal F	<i>Nature</i> 313 (6000) 277-284 (1985)
HXB2R HXB2RCG				
LAI HIVHXB2CG				
LAI BRU BRUCCG	HIVLAICG	K02013	Wain-Hobson S	<i>Cell</i> 40 , 9-17 (1985)
OYI 397	HIVOYI	M26727	Huet T	<i>AIDS</i> 3 (11) 707-715 (1989)
CAMI	HIVCAMI	D10112	McIntosh AA	Unpublished (1991)
3202A21	HIV1ACH320A	U3404	Gullion C	<i>ARHR</i> 11 (12) 1537-1541 (1995)
ACH3202A21				
JRFL	HIVJRFL	U63632	O'Brien WA	<i>Nature</i> 348 , 9-73 (1990)
MNCG MN	HIVMN	M17449	Gurgo C	<i>Virology</i> 14 , 531-536 (1988)
RF HAT3	HIVRF	M17451	Starich BR	<i>Cell</i> 45 , 37-648 (1986)
HIVSF2CG		K02007	van Beveren CP	In: Weiss <i>RNA Tumor Viruses</i> , Second Edition, Vol. 2: 1124-1141 (1985)
WEAU10 GHOSH	HIVWEAU10	U21135	Ghosh SK	Unpublished (1995)
92BR025	H92BR025	U52953	Gao F	<i>J Virol</i> 70 (3) 151-1667 (1996)
BW9BW0502	BW9BW0502		Novitsky V	Unpublished (1998)

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ETH2220 C2220	HIVETH2220	U46016	Salminen MO	<i>ARRR 12</i> (14) 1329–1339 (1996)
11246	IN11246	AF067159	Lole KS	<i>J Virol 73</i> (1) 152–160 (1999)
2108	CIN2108	AF067155	Lole KS	<i>J Virol 73</i> (1) 152–160 (1999)
301999	CIN301999	AF07154	Lole KS	<i>J Virol 73</i> (1) 152–160 (1999)
94UG1141	94UG114	U88824	Gao F	<i>J Virol 72</i> (7) 580–98 (1998)
84ZR085	84ZR085	U88822	Gao F	<i>J Virol 72</i> (7) 580–98 (1998)
ELI ELJCG	HIVELJCG	K03454	Alizon M	<i>Cell 4</i> , 63–74 (1986)
NDK	HIVNDK	M27323	Spire B	<i>Gene 81</i> , 275–284 (1989)
Z2Z6 Z2 Z34	HIVZ2Z6	M22639	Theodore T	Unpublished (1988)
93BR0201	93BR020	AF005494	Gao F	<i>J Virol 72</i> (7) 580–98 (1998)
FIN9363	FIN9363	AF075703	Salminen M	Unpublished (1998)
DRCBL	DRCBL	AF084936	Debyser Z	<i>ARRR</i> , in press (1999)
HH8793-11	HH8793	AF061640	Salminen M	<i>ARRR 8</i> (9) 1733–1742 (1992)
SE6165 G6165 G-SE- G6165	AF061642	AF061642	Carr JK	<i>Virology 247</i> (1) 22–31 (1998)
VI991	VI991	VI991	Laukkanen T	Unpublished (1998)
VI997	VI997	VI997	Laukkanen T	Unpublished (1998)
U40561, U4056, 90CR056, H90CF056	90CF056	AF005496	Murphy E	<i>ARRR 9</i> (10) 997–100(1993)
SE91733	SE91733	AF082395	Laukkanen T	<i>ARRR 15</i> (3) 293–297 (1999)
SE92809	SE92809	AF082394	Laukkanen T	<i>ARRR 15</i> (3) 293–297 (1999)
YBF30	NCMYBF30	AJ006022	Simon F	<i>Nature Medicine 4</i> (9) 1032–1037 (1998)
ANT70C	HIVANT70C	L20587	Vanden Haesevelde M	<i>J Virol 8</i> (3) 1586–1596 (1994)
MVP5180	HIVMVP5180	L20571	Gurtler LG	<i>J Virol 8</i> (3) 1581–1585 (1994)

90cr402 HIVU51188	HIV90CF402	U51188	Gao F	<i>J Virol</i> 70 (10) 7013–7029 (1996)
90CR402 CAR-E 4002				
93TH253	H93TH253	U51189	Gao F	<i>J Virol</i> 70 (10) 7013–7029 (1996)
CM240	HIV1CM240	U54771	Carr JK	<i>J Virol</i> 70 (9) 5935–5943 (1996)
DJ263	DJ263	AF063223	Carr JK	<i>Virology</i> 247 (1) 22–31 (1998)
DJ264	HDJ264	AF063224	Carr JK	<i>Virology</i> 247 (1) 22–31 (1998)
IBNG	HIVIBNG	L39106	Howard TM	<i>ARHR</i> 10 (12) 1755–1757 (1994)
94CY032-3	AF049337	AF049337	Gao F	<i>J Virol</i> 72 (12) 10234–10241 (1998)
97PVCH	AF049292	AF049292	Nasioulas G	<i>ARHR</i> 14 (8) 85–690 (1998)
97PVMY GR84	97PVMY	AF119819	Nasioulas G	<i>ARHR</i> 14 (8) 685–690 (1998)
CPZGAB	SIVCPZGAB	X52154	Huet T	<i>Nature</i> 345 , 35–359 (1990)
CPZANT	SIVCPZANT	U42720	Vanden Haesevelde MM	<i>Virology</i> 221 (2) 34–350 (1996)
SIVCPZUS	SIVCPZUS	AF103818	Gao F	<i>Nature</i> 397 (6718) 436–441 (1999)

II-A-11
DEC 98

II-A-12
DEC 98

B.FR.HX82	FRREDIAPLOQK.AREF.SSEOT.RANSPT	RRELOWGRDN	NSBSEAGAD	ROGTV	SFNFPOYTLMQRPLVITKIGQLEALDDTGADDTVLEMSLPGRWKPKMI	protease	< 999 cds end	
A.KE.S02317	---N-QK-E---	GT-S	S-D-WDG-S	L	E	E	L	I
A.SE.S0231723	---N-Q-E---	GT-S	S-D-WDG-S	L	E	E	L	I
A.SE.TZSR8538	---N-Q-E---	GT-S	S-D-WDG-S	L	E	E	L	I
A.SE.UGSR8891	---N-Q-E---	GT-S	S-D-WDG-S	L	E	E	L	I
A.UG.92U0037	---N-Q-E---	GT-S	S-D-WDG-S	L	E	E	L	I
A.UG.U455	---N-Q-E---	GT-S	S-D-WDG-S	L	E	E	L	I
B.AU.MBC18	---N-Q-E---	GT-S	S-D-WDG-S	L	E	E	L	I
B.ON.CNRL42	---N-Q-E---	GT-S	S-D-WDG-S	L	E	E	L	I
B.DE.D31	---N-Q-E---	GT-S	S-D-WDG-S	L	E	E	L	I
B.FR.IAT	---N-Q-E---	GT-S	S-D-WDG-S	L	E	E	L	I
B.GA.OY1	---N-Q-E---	GT-S	S-D-WDG-S	L	E	E	L	I
B.GB.CAM1	---N-Q-E---	GT-S	S-D-WDG-S	L	E	E	L	I
B.NL.ACH320A	---N-Q-E---	GT-S	S-D-WDG-S	L	E	E	L	I
B.US.JRFL	---N-Q-E---	GT-S	S-D-WDG-S	L	E	E	L	I
B.US.MN	---N-Q-E---	GT-S	S-D-WDG-S	L	E	E	L	I
B.US.RF	---N-Q-E---	GT-S	S-D-WDG-S	L	E	E	L	I
B.US.SF2	---N-Q-E---	GT-S	S-D-WDG-S	L	E	E	L	I
B.US.WEAV160	---N-Q-E---	GT-S	S-D-WDG-S	L	E	E	L	I
C.BR.92BR025	---N-Q-E---	GT-S	S-D-WDG-S	L	E	E	L	I
C.BW.96BM0502	---N-Q-E---	GT-S	S-D-WDG-S	L	E	E	L	I
C.ET.ETH2220	---N-Q-E---	GT-S	S-D-WDG-S	L	E	E	L	I
C.IN.11246	---N-Q-E---	GT-S	S-D-WDG-S	L	E	E	L	I
C.IN.21068	---N-Q-E---	GT-S	S-D-WDG-S	L	E	E	L	I
C.IN.30199	---N-Q-E---	GT-S	S-D-WDG-S	L	E	E	L	I
D.UG.94UG114	---N-Q-E---	GT-S	S-D-WDG-S	L	E	E	L	I
D.ZR.84ZR085	---N-Q-E---	GT-S	S-D-WDG-S	L	E	E	L	I
D.ZR.EL1	---N-Q-E---	GT-S	S-D-WDG-S	L	E	E	L	I
D.ZR.NDK	---N-Q-E---	GT-S	S-D-WDG-S	L	E	E	L	I
D.ZR.2226	---N-Q-E---	GT-S	S-D-WDG-S	L	E	E	L	I
F.BR.93BR020	---N-Q-E---	GT-S	S-D-WDG-S	L	E	E	L	I
F.FI.FIN3363	---N-Q-E---	GT-S	S-D-WDG-S	L	E	E	L	I
G.BE.DRCBL	---N-Q-E---	GT-S	S-D-WDG-S	L	E	E	L	I
G.FI.HH8793-11	---N-Q-E---	GT-S	S-D-WDG-S	L	E	E	L	I
G.SE.SR6165	---N-Q-E---	GT-S	S-D-WDG-S	L	E	E	L	I
H.BE.VI991	---N-Q-E---	GT-S	S-D-WDG-S	L	E	E	L	I
H.BE.VI991	---N-Q-E---	GT-S	S-D-WDG-S	L	E	E	L	I
H.CF.90CF056	---N-Q-E---	GT-S	S-D-WDG-S	L	E	E	L	I
J.SE.SE91733	---N-Q-E---	GT-S	S-D-WDG-S	L	E	E	L	I
J.SE.SE92809	---N-Q-E---	GT-S	S-D-WDG-S	L	E	E	L	I
N.CM.YBF30	---N-Q-E---	GT-S	S-D-WDG-S	L	E	E	L	I
O.CM.ANT10	---N-Q-E---	GT-S	S-D-WDG-S	L	E	E	L	I
O.CM.MVP5180	---N-Q-E---	GT-S	S-D-WDG-S	L	E	E	L	I
O.CF.90CF042	---N-Q-E---	GT-S	S-D-WDG-S	L	E	E	L	I
AE.TH.93TH253	---N-Q-E---	GT-S	S-D-WDG-S	L	E	E	L	I
AE.TH.CM240	---N-Q-E---	GT-S	S-D-WDG-S	L	E	E	L	I
AG.DJ.DI263	---N-Q-E---	GT-S	S-D-WDG-S	L	E	E	L	I
AG.DJ.DI264	---N-Q-E---	GT-S	S-D-WDG-S	L	E	E	L	I
AG.NG.IBNG	---N-Q-E---	GT-S	S-D-WDG-S	L	E	E	L	I
AGI.CY.94CY0323	---N-Q-E---	GT-S	S-D-WDG-S	L	E	E	L	I
AGI.GR.97PVGH	---N-Q-E---	GT-S	S-D-WDG-S	L	E	E	L	I
AGI.GR.97PVWY	---N-Q-E---	GT-S	S-D-WDG-S	L	E	E	L	I
CPZGAB	---N-Q-E---	GT-S	S-D-WDG-S	L	E	E	L	I
CPZANT	---N-Q-E---	GT-S	S-D-WDG-S	L	E	E	L	I
STVcpus	---N-Q-E---	GT-S	S-D-WDG-S	L	E	E	L	I

Amino Acids

	polymerase motif	
B, FR, HXB2	DPRELNKRTQDPWEVYOLGHPHPAGLKKKSVTLVDVGPAYPSVPLDDEDFRKYTAFTTIPISINNENPPGIRYOYVNLDPQGWKSPALIFQSSMTKLIIDPPRKONPPDIVIYQYWDLDLYGSDLEIGQHPRTIBEL	360
A, KE, Q2317	-----H-E-----T-----V-----S-----I-----A-----	360
A, SE, S0S87283	-----S-----T-----V-----S-----I-----A-----	360
A, SE, TZSR8538	-----S-----T-----V-----S-----I-----A-----	360
A, SE, I0GSE8891	-----S-----T-----V-----S-----I-----A-----	360
A, UG, 92UG037#-----S-----T-----V-----S-----I-----A-----	355
A, UG, 0435	-----S-----T-----V-----S-----I-----A-----	361
B, AU, M8C18	-----S-----T-----V-----S-----I-----A-----	359
B, CN, CNRL42	-----S-----T-----V-----S-----I-----A-----	372
B, DE, D31	-----S-----T-----V-----S-----I-----A-----	360
B, FR, LAI	-----S-----T-----V-----S-----I-----A-----	360
B, GA, OYI	-----S-----T-----V-----S-----I-----A-----	372
B, GB, CAM1	-----S-----T-----V-----S-----I-----A-----	360
B, NL, ACH320A	-----S-----T-----V-----S-----I-----A-----	360
B, US, JRRFL	-----S-----T-----V-----S-----I-----A-----	360
B, US, MN	-----S-----T-----V-----S-----I-----A-----	363
B, US, RF	-----S-----T-----V-----S-----I-----A-----	359
B, US, SF2	-----S-----T-----V-----S-----I-----A-----	360
B, US, WEAU160	-----S-----T-----V-----S-----I-----A-----	360
C, BR, 92BR025	-----S-----T-----V-----S-----I-----A-----	358
C, BW, 96BM0502	-----S-----T-----V-----S-----I-----A-----	366
C, ET, ETH2220	-----S-----T-----V-----S-----I-----A-----	367
C, IN, 11246	-----S-----T-----V-----S-----I-----A-----	356
C, IN, 21068	-----S-----T-----V-----S-----I-----A-----	355
C, IN, 301999	-----S-----T-----V-----S-----I-----A-----	365
D, UG, 94UG114	-----S-----T-----V-----S-----I-----A-----	361
D, ZR, 84ZR085	-----S-----T-----V-----S-----I-----A-----	360
D, ZR, FLT	-----S-----T-----V-----S-----I-----A-----	359
D, ZR, NDK	-----S-----T-----V-----S-----I-----A-----	359
D, ZR, 2226	-----S-----T-----V-----S-----I-----A-----	359
F, BR, 93BR020	-----S-----T-----V-----S-----I-----A-----	360
F, FI, FIN9363	-----S-----T-----V-----S-----I-----A-----	359
G, BE, DR0BL	-----S-----T-----V-----S-----I-----A-----	356
G, FI, HH8793-11	-----S-----T-----V-----S-----I-----A-----	357
G, SE, SE6165	-----S-----T-----V-----S-----I-----A-----	357
H, BE, VI991	-----S-----T-----V-----S-----I-----A-----	358
H, BE, VI997	-----S-----T-----V-----S-----I-----A-----	358
H, CF, 90CF056	-----S-----T-----V-----S-----I-----A-----	359
J, SE, SE91733	-----S-----T-----V-----S-----I-----A-----	358
J, SE, SE92809	-----S-----T-----V-----S-----I-----A-----	358
N, CM, IBR50	-----S-----T-----V-----S-----I-----A-----	367
O, CM, ANI70	-----S-----T-----V-----S-----I-----A-----	366
O, CM, MWP5180	-----S-----T-----V-----S-----I-----A-----	356
AE, CF, 90CF402	-----S-----T-----V-----S-----I-----A-----	360
AE, TH, 93TH253	-----S-----T-----V-----S-----I-----A-----	352
AE, TH, CM240	-----S-----T-----V-----S-----I-----A-----	365
AG, DJ, DJ263	-----S-----T-----V-----S-----I-----A-----	360
AG, DJ, DJ264	-----S-----T-----V-----S-----I-----A-----	360
AG, NG, IBNG	-----S-----T-----V-----S-----I-----A-----	359
AGI, CY, 94CY0323	-----S-----T-----V-----S-----I-----A-----	359
AGI, GR, 97PVMY	-----S-----T-----V-----S-----I-----A-----	359
CEZGMB	-----S-----T-----V-----S-----I-----A-----	358
CEZANT	-----S-----T-----V-----S-----I-----A-----	358
STVcp2US	-----S-----T-----V-----S-----I-----A-----	362

p66, RNase H \ / Integrase

B, FR, HXB2	RQKVTLLDPTNQKTEQLQAIYIALQDSGLFVNIWVDSQYALGIIQAO	PDQSESLVNVQIIIEQLIKKRYVLAWVPAHKIGIGNEQVDKLVS	AGIRKRVFLFDGIDKAQD	DHEKRYHNSMWRMASDFNMLPPV	747
A, KE, Q2317	---S-E---H-H---S---K-I---K-E-D---S	---S-E---H-H---S---K-I---K-E-D---S	---S-E---H-H---S---K-I---K-E-D---S	---S-E---H-H---S---K-I---K-E-D---S	747
A, SE, S05E7253	---S-E---H-H---S---K-I---K-E-D---S	---S-E---H-H---S---K-I---K-E-D---S	---S-E---H-H---S---K-I---K-E-D---S	---S-E---H-H---S---K-I---K-E-D---S	747
A, SE, TZSR8538	---S-E---VH-H---S---S---I---K-G-D---S	---S-E---VH-H---S---S---I---K-G-D---S	---S-E---VH-H---S---S---I---K-G-D---S	---S-E---VH-H---S---S---I---K-G-D---S	747
A, SE, UGSE8891	---AE---H-H---S---R---K-G-D---S	---AE---H-H---S---R---K-G-D---S	---AE---H-H---S---R---K-G-D---S	---AE---H-H---S---R---K-G-D---S	747
A, UG, 92UG037	---S-E---H-H---S---R---K-E-D---S	---S-E---H-H---S---R---K-E-D---S	---S-E---H-H---S---R---K-E-D---S	---S-E---H-H---S---R---K-E-D---S	747
A, UG, U0435	---S-E---H-H---S---S---K-I-N---K-E-D---S	---S-E---H-H---S---S---K-I-N---K-E-D---S	---S-E---H-H---S---S---K-I-N---K-E-D---S	---S-E---H-H---S---S---K-I-N---K-E-D---S	746
B, AU, MBEC18	---S-A---H-H---S---V---K-I---K-I-N---K-E-D---S	---S-A---H-H---S---V---K-I---K-I-N---K-E-D---S	---S-A---H-H---S---V---K-I---K-I-N---K-E-D---S	---S-A---H-H---S---V---K-I---K-I-N---K-E-D---S	746
B, CN, CNRL42	---S---H-H---S---V---S---I---K-K---S---T	---S---H-H---S---V---S---I---K-K---S---T	---S---H-H---S---V---S---I---K-K---S---T	---S---H-H---S---V---S---I---K-K---S---T	759
B, DE, D31	---S---H-H---S---K-K---S---E	---S---H-H---S---K-K---S---E	---S---H-H---S---K-K---S---E	---S---H-H---S---K-K---S---E	747
B, FR, LAI	---S---H-H---S---K-K---S---E	---S---H-H---S---K-K---S---E	---S---H-H---S---K-K---S---E	---S---H-H---S---K-K---S---E	747
B, GA, OYI	---S-N---N---K-K---S---E	---S-N---N---K-K---S---E	---S-N---N---K-K---S---E	---S-N---N---K-K---S---E	747
B, GB, CAM1	---S-N---N---K-K---S---E	---S-N---N---K-K---S---E	---S-N---N---K-K---S---E	---S-N---N---K-K---S---E	747
B, NL, ACH320A	---S-N---N---K-K---S---E	---S-N---N---K-K---S---E	---S-N---N---K-K---S---E	---S-N---N---K-K---S---E	747
B, US, JRF1	---S---H-H---S---K-K---S---E	---S---H-H---S---K-K---S---E	---S---H-H---S---K-K---S---E	---S---H-H---S---K-K---S---E	749
B, US, MN	---S---H-H---S---K-K---S---E	---S---H-H---S---K-K---S---E	---S---H-H---S---K-K---S---E	---S---H-H---S---K-K---S---E	746
B, US, RF	---S---H-H---S---K-K---S---E	---S---H-H---S---K-K---S---E	---S---H-H---S---K-K---S---E	---S---H-H---S---K-K---S---E	747
B, US, SF2	---SIA---H-H---S---K-K---S	---SIA---H-H---S---K-K---S	---SIA---H-H---S---K-K---S	---SIA---H-H---S---K-K---S	747
B, US, WEAL160	---R-S---H-H---S---S---R---S	---R-S---H-H---S---S---R---S	---R-S---H-H---S---S---R---S	---R-S---H-H---S---S---R---S	747
C, BR, 92BR025	---I-S-E---Q-Q---S---R---S	---I-S-E---Q-Q---S---R---S	---I-S-E---Q-Q---S---R---S	---I-S-E---Q-Q---S---R---S	753
C, BW, 96BW0502	---I-S-E---Q-Q---S---R---S	---I-S-E---Q-Q---S---R---S	---I-S-E---Q-Q---S---R---S	---I-S-E---Q-Q---S---R---S	754
C, ET, ETH2220	---I-S-E---Q-Q---S---R---S	---I-S-E---Q-Q---S---R---S	---I-S-E---Q-Q---S---R---S	---I-S-E---Q-Q---S---R---S	743
C, IN, 11246	---I-S-E---Q-Q---S---R---S	---I-S-E---Q-Q---S---R---S	---I-S-E---Q-Q---S---R---S	---I-S-E---Q-Q---S---R---S	742
C, IN, 21068	---N-I-S-E---C---S---NK---R---S	---N-I-S-E---C---S---NK---R---S	---N-I-S-E---C---S---NK---R---S	---N-I-S-E---C---S---NK---R---S	752
C, IN, 30199	---I-P-E---K-K---S---R---S	---I-P-E---K-K---S---R---S	---I-P-E---K-K---S---R---S	---I-P-E---K-K---S---R---S	748
D, UG, 94UG114	---S---N---K-K---S---E	---S---N---K-K---S---E	---S---N---K-K---S---E	---S---N---K-K---S---E	747
D, ZR, 84ZR085	---PF---N---K-K---S---E	---PF---N---K-K---S---E	---PF---N---K-K---S---E	---PF---N---K-K---S---E	746
D, ZR, ELI	---PF---N---K-K---S---E	---PF---N---K-K---S---E	---PF---N---K-K---S---E	---PF---N---K-K---S---E	746
D, ZR, NDK	---PF---N---K-K---S---E	---PF---N---K-K---S---E	---PF---N---K-K---S---E	---PF---N---K-K---S---E	746
D, ZR, Z226	---PF---N---K-K---S---E	---PF---N---K-K---S---E	---PF---N---K-K---S---E	---PF---N---K-K---S---E	746
F, BR, 93BR020	---A-S-E---A---Q---S---K-K---S	---A-S-E---A---Q---S---K-K---S	---A-S-E---A---Q---S---K-K---S	---A-S-E---A---Q---S---K-K---S	747
F, FI, FIN363	---S-E---A---H---Q---S---R---I	---S-E---A---H---Q---S---R---I	---S-E---A---H---Q---S---R---I	---S-E---A---H---Q---S---R---I	743
G, BE, DRCHL	---I-I-E---A---H---Q---S---R---I	---I-I-E---A---H---Q---S---R---I	---I-I-E---A---H---Q---S---R---I	---I-I-E---A---H---Q---S---R---I	746
G, FI, HH8793-11	---K-II-E---A---Q---S---R---A	---K-II-E---A---Q---S---R---A	---K-II-E---A---Q---S---R---A	---K-II-E---A---Q---S---R---A	744
G, SE, SE6165	---K-II-E---A---Q---S---R---A	---K-II-E---A---Q---S---R---A	---K-II-E---A---Q---S---R---A	---K-II-E---A---Q---S---R---A	745
H, BE, VI991	---K-I-S-E---K-K---S---E	---K-I-S-E---K-K---S---E	---K-I-S-E---K-K---S---E	---K-I-S-E---K-K---S---E	744
H, BE, VI997	---K-A-E---K-K---S---E	---K-A-E---K-K---S---E	---K-A-E---K-K---S---E	---K-A-E---K-K---S---E	745
H, CF, 90CF056	---K-S-E---K-K---S---E	---K-S-E---K-K---S---E	---K-S-E---K-K---S---E	---K-S-E---K-K---S---E	745
J, SE, SE91733	---I---H---R---I---K-K---S	---I---H---R---I---K-K---S	---I---H---R---I---K-K---S	---I---H---R---I---K-K---S	745
J, SE, SE92809	---I---H---R---I---K-K---S	---I---H---R---I---K-K---S	---I---H---R---I---K-K---S	---I---H---R---I---K-K---S	745
N, CM, YBE30	---SIA---A---LM---E---RD---M---HS---K---K---S	---SIA---A---LM---E---RD---M---HS---K---K---S	---SIA---A---LM---E---RD---M---HS---K---K---S	---SIA---A---LM---E---RD---M---HS---K---K---S	754
O, CM, AN170	---K-IIR-DE---A---M---L---KET---M---SS---T---PI---Q---E---T---R---S	---K-IIR-DE---A---M---L---KET---M---SS---T---PI---Q---E---T---R---S	---K-IIR-DE---A---M---L---KET---M---SS---T---PI---Q---E---T---R---S	---K-IIR-DE---A---M---L---KET---M---SS---T---PI---Q---E---T---R---S	743
O, CM, WVP8180	---K-NIIR-EE---A---M---LI---KEQ---V---SS---R---D---PI---Q---E---T---R---T	---K-NIIR-EE---A---M---LI---KEQ---V---SS---R---D---PI---Q---E---T---R---T	---K-NIIR-EE---A---M---LI---KEQ---V---SS---R---D---PI---Q---E---T---R---T	---K-NIIR-EE---A---M---LI---KEQ---V---SS---R---D---PI---Q---E---T---R---T	743
AE, CF, 90CF402	---S-E---H-H---S---P---K-E-E	---S-E---H-H---S---P---K-E-E	---S-E---H-H---S---P---K-E-E	---S-E---H-H---S---P---K-E-E	747
AE, TH, 93TH253	---IS-E---H-H---S---R---V---E-E-E	---IS-E---H-H---S---R---V---E-E-E	---IS-E---H-H---S---R---V---E-E-E	---IS-E---H-H---S---R---V---E-E-E	739
AE, TH, CM240	---S-E---H-H---S---R---V---E-E-E	---S-E---H-H---S---R---V---E-E-E	---S-E---H-H---S---R---V---E-E-E	---S-E---H-H---S---R---V---E-E-E	752
AG, DJ, DJ263	---S-E---H-H---S---R---V---E-E-E	---S-E---H-H---S---R---V---E-E-E	---S-E---H-H---S---R---V---E-E-E	---S-E---H-H---S---R---V---E-E-E	747
AG, DJ, DJ264	---S-E---H-H---S---R---V---E-E-E	---S-E---H-H---S---R---V---E-E-E	---S-E---H-H---S---R---V---E-E-E	---S-E---H-H---S---R---V---E-E-E	747
AG, NG, IBNG	---S-E---H-H---S---R---V---E-E-E	---S-E---H-H---S---R---V---E-E-E	---S-E---H-H---S---R---V---E-E-E	---S-E---H-H---S---R---V---E-E-E	747
AGI, CY, 94CY0323	---S-SE---R---H-H---S---I---R---D---S	---S-SE---R---H-H---S---I---R---D---S	---S-SE---R---H-H---S---I---R---D---S	---S-SE---R---H-H---S---I---R---D---S	746
AGI, GR, 97PVGH	---S-SE---R---K-S---I---R---D---S	---S-SE---R---K-S---I---R---D---S	---S-SE---R---K-S---I---R---D---S	---S-SE---R---K-S---I---R---D---S	745
AGI, GR, 97PVYX	---I---PE---R---K-S---M---K---D---S	---I---PE---R---K-S---M---K---D---S	---I---PE---R---K-S---M---K---D---S	---I---PE---R---K-S---M---K---D---S	746
CP2ZGAB	---K-IIS-EM---QA---K---LI---DOO---V---S---H---I---S	---K-IIS-EM---QA---K---LI---DOO---V---S---H---I---S	---K-IIS-EM---QA---K---LI---DOO---V---S---H---I---S	---K-IIS-EM---QA---K---LI---DOO---V---S---H---I---S	745
CPZANI	---SR-KH-QK---QA---LM---E---TGP---VL-GT---P---BE---QK---R---QI---S	---SR-KH-QK---QA---LM---E---TGP---VL-GT---P---BE---QK---R---QI---S	---SR-KH-QK---QA---LM---E---TGP---VL-GT---P---BE---QK---R---QI---S	---SR-KH-QK---QA---LM---E---TGP---VL-GT---P---BE---QK---R---QI---S	745
STVcp2US	---II-EM---A---I---V---K---ENT---V---G---V---HS---P---BE---QK---R---QI---S	---II-EM---A---I---V---K---ENT---V---G---V---HS---P---BE---QK---R---QI---S	---II-EM---A---I---V---K---ENT---V---G---V---HS---P---BE---QK---R---QI---S	---II-EM---A---I---V---K---ENT---V---G---V---HS---P---BE---QK---R---QI---S	749

II-A-17
DEC 98

Amino Acids

B, FR, HXB2	AKETVASC	DKKGEAMHGQVDCSPGIWDLDC	HTLEGGVILVAHVAVASGYIEAEV	IPAEFTGQETAVFLIKLAGRMPEVK	TIHFDNGSNFTGATVRAACWMA	GAGIKQEFGI	PYNPDSOGV	ESMNRK	ELK	I	877
A, KE, Q2317	---	---	V	---	---	---	---	---	---	---	877
A, SE, SOSR7253	---	---	---	---	---	---	---	---	---	---	877
A, SE, TZSR8538	---	---	---	---	---	---	---	---	---	---	877
A, SE, UGSR8891	---	---	---	---	---	---	---	---	---	---	877
A, UG, 92UG037	---	---	---	---	---	---	---	---	---	---	877
A, UG, U455	---	---	---	---	---	---	---	---	---	---	876
B, AU, MBG18	---	---	---	---	---	---	---	---	---	---	889
B, CN, CNRL42	---	---	---	---	---	---	---	---	---	---	877
B, DE, D31	---	---	---	---	---	---	---	---	---	---	889
B, FR, LAI	---	---	---	---	---	---	---	---	---	---	877
B, GA, OYI	---	---	---	---	---	---	---	---	---	---	877
B, GB, CAM1	---	---	---	---	---	---	---	---	---	---	877
B, NL, ACH320A	---	---	---	---	---	---	---	---	---	---	877
B, US, JRF1	---	---	---	---	---	---	---	---	---	---	879
B, US, MN	---	---	---	---	---	---	---	---	---	---	876
B, US, RF	---	---	---	---	---	---	---	---	---	---	877
B, US, SF2	---	---	---	---	---	---	---	---	---	---	877
B, US, WEAL160	---	---	---	---	---	---	---	---	---	---	874
C, BR, 92BR025	---	---	---	---	---	---	---	---	---	---	883
C, BW, 96BW0502	---	---	---	---	---	---	---	---	---	---	884
C, ET, ETH2220	---	---	---	---	---	---	---	---	---	---	873
C, IN, 11246	---	---	---	---	---	---	---	---	---	---	882
C, IN, 21068	---	---	---	---	---	---	---	---	---	---	878
C, IN, 301999	---	---	---	---	---	---	---	---	---	---	877
D, UG, 94UG114	---	---	---	---	---	---	---	---	---	---	876
D, ZR, 84ZR085	---	---	---	---	---	---	---	---	---	---	876
D, ZR, ELI	---	---	---	---	---	---	---	---	---	---	876
D, ZR, NDK	---	---	---	---	---	---	---	---	---	---	877
D, ZR, 2226	---	---	---	---	---	---	---	---	---	---	876
F, BR, 93BR020	---	---	---	---	---	---	---	---	---	---	876
F, FI, FIN3363	---	---	---	---	---	---	---	---	---	---	873
G, BE, DRGBL	---	---	---	---	---	---	---	---	---	---	876
G, FI, HH8793-11	---	---	---	---	---	---	---	---	---	---	874
G, SE, SE6165	---	---	---	---	---	---	---	---	---	---	875
H, BE, VI991	---	---	---	---	---	---	---	---	---	---	874
H, BE, VI997	---	---	---	---	---	---	---	---	---	---	876
H, CF, 90CF056	---	---	---	---	---	---	---	---	---	---	875
J, SE, SE91733	---	---	---	---	---	---	---	---	---	---	875
J, SE, SE92809	---	---	---	---	---	---	---	---	---	---	884
N, CM, YBF30	---	---	---	---	---	---	---	---	---	---	873
O, CM, ANPT70	---	---	---	---	---	---	---	---	---	---	873
O, CM, MVPE180	---	---	---	---	---	---	---	---	---	---	873
AE, CF, 90CF402	---	---	---	---	---	---	---	---	---	---	877
AE, TH, 93TH253	---	---	---	---	---	---	---	---	---	---	882
AG, TH, CM240	---	---	---	---	---	---	---	---	---	---	877
AG, DJ, DJ263	---	---	---	---	---	---	---	---	---	---	877
AG, DJ, DJ264	---	---	---	---	---	---	---	---	---	---	877
AG, NG, IBNG	---	---	---	---	---	---	---	---	---	---	876
AGI, CY, 94CY0323	---	---	---	---	---	---	---	---	---	---	875
AGI, GR, 97PVGH	---	---	---	---	---	---	---	---	---	---	876
AGI, GR, 97PVWY	---	---	---	---	---	---	---	---	---	---	875
CRZGAB	---	---	---	---	---	---	---	---	---	---	880
CRZANT	---	---	---	---	---	---	---	---	---	---	879
STVCP2US	---	---	---	---	---	---	---	---	---	---	879

