

L protein

	20	40	60	80	100	120	140	160	180	200	220	240	260	280	300	320	340	360	380	400	420	440	460	480	500												
RSVA Memphis-37	MDPI	I	NGNSA	NVYL	TD	SYLK	GVIS	FSE	CNCA	LGSI	YF	NGPY	LKND	YTN	LIS	RQNPL	IEH	IN	LKKN	LIT	QSL	ISKY	HKGE	IK	IEEP	TYF	QSL	LMTY	KSM	TSS	100						
RSVA Nashville	100						
RSVA Denver	.	.	S	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	100
RSVA Milwaukee	100						
RSVA VR-26 Long	100						
RSVA A2	100						
RSVB Dallas	100						
RSVB Milwaukee	100						
RSVB 9320	100						
RSVB strain B1	100						
RSVA Memphis-37	EQI	TTT	NLLK	KIIR	RAI	EIS	DVKV	YAIL	LNK	LGLK	EK	DKIK	SNGQ	DENN	S	VIT	I	KDDI	LLAV	KDN	QSH	LKAG	KNH	STK	QKDT	IK	TTLL	KKLM	CSM	QHP	200						
RSVA Nashville	200						
RSVA Denver	200						
RSVA Milwaukee	200						
RSVA VR-26 Long	200						
RSVA A2	200						
RSVB Dallas	200						
RSVB Milwaukee	200						
RSVB 9320	200						
RSVB strain B1	200						
RSVA Memphis-37	PSWL	I	HWF	NL	YTKL	NN	LTQ	YRSN	EVK	NKHG	FIL	DN	QTLN	GFG	FIL	NQYG	CIVY	HKEL	KR	ITVT	TYN	QFL	TWKD	ISL	SRL	NVCL	LIT	WISN	CLNT	LNK	SLG	300					
RSVA Nashville	300			
RSVA Denver	S	300			
RSVA Milwaukee	300			
RSVA VR-26 Long	300			
RSVA A2	300			
RSVB Dallas	300			
RSVB Milwaukee	300			
RSVB 9320	300			
RSVB strain B1	300			
RSVA Memphis-37	LRCG	FNN	VIL	TQLF	LYG	DCI	LKLF	HN	EGFY	I	IKEV	EGF	I	SLIL	NITE	EED	QFRK	RFY	NSM	LNNI	TD	AANK	AQKN	LLS	RV	HTLL	DKT	VSD	NI	INGR	WII	L	400				
RSVA Nashville	400			
RSVA Denver	H	400			
RSVA Milwaukee	400			
RSVA VR-26 Long	400			
RSVA A2	400			
RSVB Dallas	400			
RSVB Milwaukee	400			
RSVB 9320	400			
RSVB strain B1	400			
RSVA Memphis-37	LSKF	LKL	IKL	AGDN	NN	NNLS	ELYF	LF	RI	FG	HPMV	D	ER	QAM	DAVK	VNC	NET	KFYLL	SSL	LSM	LRGA	F	I	RI	KG	FV	NNY	NRW	PTLR	NAI	VLP	LRLW	TTY	KL	N	500	
RSVA Nashville	500
RSVA Denver	500
RSVA Milwaukee	500
RSVA VR-26 Long	500
RSVA A2	500
RSVB Dallas	500
RSVB Milwaukee	500
RSVB 9320	500
RSVB strain B1	500

 Variable region

L protein

		520		540		560		580		600		
RSVA Memphis-37	TYP S L L E L T E	R D L I V L S G L R	F Y R E F R L P K K	V D L E M I I N D K	A I S P P K N L I W	T S F P R N Y M P S	H I Q N Y I E H E K	L K F S E S D K S R	R V L E Y Y L R D N	K F N E C D L Y N C	600	
RSVA Nashville	.	.	.	.	.	.	.	.	.	.	600
RSVA Denver	.	.	.	.	.	.	.	.	.	.	600
RSVA Milwaukee	.	.	.	.	.	.	.	.	.	.	600
RSVA VR-26 Long	.	.	.	.	.	.	.	.	.	.	600
RSVA A2	.	.	.	.	.	.	.	.	.	.	600
RSVB Dallas	.	I	N	I	H	.	D	.	R	.	600	
RSVB Milwaukee	.	I	N	I	H	.	D	.	R	.	600	
RSVB 9320	.	I	N	I	H	.	D	.	R	.	600	
RSVB strain B1	.	I	N	I	H	.	D	.	R	.	600	
		620		640		660		680		700		
RSVA Memphis-37	V V N Q S Y L N N P	N H V V S L T G K E	R E L S V G R M F A	M O P G M F R Q V Q	I L A E K M I A E N	I L Q F F P E S L T	R Y G D L E L Q K I	L E L K A G I S N K	S N R Y N D N Y N N	Y I S K C S I I T D	700	
RSVA Nashville	.	.	.	.	.	.	.	.	.	.	700
RSVA Denver	.	.	.	.	.	.	.	.	.	.	700
RSVA Milwaukee	.	.	.	.	.	.	.	.	.	.	700
RSVA VR-26 Long	.	.	.	.	.	.	.	.	.	.	700
RSVA A2	.	.	.	.	.	.	.	.	.	.	700
RSVB Dallas	.	.	S	.	I	.	.	.	.	.	700
RSVB Milwaukee	.	.	S	.	I	.	.	.	.	.	700
RSVB 9320	.	.	S	.	I	.	.	.	.	.	700
RSVB strain B1	.	.	S	.	I	.	.	.	.	.	700
		720		740		760		780		800		
RSVA Memphis-37	L S K F N Q A F R Y	E T S C I C S D V L	D E L H G V Q S L F	S W L H L T I P H V	T I I C T Y R H A P	P Y I R D H I V D L	N N V D E Q S G L Y	R Y H M G G I E G W	C Q K L W T I E A I	S L L D L I S L K G	800	
RSVA Nashville	.	.	.	.	.	.	.	.	.	.	800
RSVA Denver	.	.	.	.	.	.	.	.	.	.	800
RSVA Milwaukee	.	.	.	.	.	.	.	.	.	.	800
RSVA VR-26 Long	.	.	.	.	.	.	.	.	.	.	800
RSVA A2	.	.	.	.	.	.	.	.	.	.	800
RSVB Dallas	.	.	.	.	L	F	K	V	N	E	800
RSVB Milwaukee	.	.	.	.	L	F	K	V	N	E	800
RSVB 9320	.	.	.	.	L	F	K	V	N	E	800
RSVB strain B1	.	.	.	.	L	F	K	V	N	E	800
		820		840		860		880		900		
RSVA Memphis-37	K F S I T A L I N G	D N Q S I D I S K P	V R L M E G O T H A	Q A D Y L L A L N S	L K L L Y K E Y A G	I G H K L K G T E T	Y I S R D M Q F M S	K T I Q H N G V Y Y	P A S I K K V L R V	G P W I N T I L D D	900	
RSVA Nashville	.	.	.	.	.	.	.	.	.	.	900
RSVA Denver	.	.	.	.	.	.	.	.	.	.	900
RSVA Milwaukee	.	.	I	.	.	.	.	.	.	.	900
RSVA VR-26 Long	.	.	I	.	.	.	.	.	.	.	900
RSVA A2	.	.	I	.	.	.	.	.	.	.	900
RSVB Dallas	.	.	.	.	I	.	.	.	.	.	900
RSVB Milwaukee	.	.	.	.	I	.	.	.	.	.	900
RSVB 9320	.	.	.	.	I	.	.	.	.	.	900
RSVB strain B1	.	.	.	.	I	.	.	.	.	.	900
		920		940		960		980		1,000		
RSVA Memphis-37	F K V S L E S I G S	L T Q E L E Y R G E	S L L C S L I F R N	V W L Y N Q I A L Q	L K N H A L C N N K	L Y L D I L K V L K	H L K T F F N L D N	I D T A L T L Y M N	L P M L F G G G D P	N L L Y R S F Y R R	1000	
RSVA Nashville	.	.	.	.	.	.	.	.	.	.	1000
RSVA Denver	.	.	.	.	.	.	.	.	.	.	1000
RSVA Milwaukee	.	.	.	.	.	.	.	.	.	.	1000
RSVA VR-26 Long	.	.	.	.	.	.	.	.	.	.	1000
RSVA A2	.	.	.	.	.	.	.	.	.	.	1000
RSVB Dallas	.	.	.	.	I	R	.	.	S	S	1000
RSVB Milwaukee	.	.	.	.	I	R	.	.	S	S	1000
RSVB 9320	.	.	.	.	I	R	.	.	S	S	1000
RSVB strain B1	I	R	.	H	S	M	S	1000
									S	M	S	1000

L protein

	1,020	1,040	1,060	1,080	1,100							
RSVA Memphis-37	TPDFLTEAIV	HSVFILSYT	NHDLKDKLQD	LSDDRNLNKF	LCIITFDKNP	NAEFVTLMRD	PQALGSERQA	KITSEINRLA	VTEVLSTAPN	KIFSKSAQHY	1100	
RSVA Nashville		V							I		1100	
RSVA Denver											1100	
RSVA Milwaukee											1100	
RSVA VR-26 Long											1100	
RSVA A2											1100	
RSVB Dallas		V	G	Q	P	V			I		1100	
RSVB Milwaukee		V	G	X	P	V			I		1100	
RSVB 9320		V	G	Q	P				I		1100	
RSVB strain B1		V	G	Q	P	V			I		1100	
	1,120	1,140	1,160	1,180	1,200							
RSVA Memphis-37	TTTEIDLNDI	MQNIEPTYPH	GLRVVYESLP	FYKAEKIVNL	ISGTKSITNI	LEKTSALDIT	DIDRATEMMR	KNITLLIRIF	PLDCNRDKRE	ILSMENLSIT	1200	
RSVA Nashville							V				1200	
RSVA Denver								LL			1200	
RSVA Milwaukee								L			1200	
RSVA VR-26 Long								L			1200	
RSVA A2								L			1200	
RSVB Dallas						T	N	D	L	K	L	1200
RSVB Milwaukee						T	N	D	L	K	L	1200
RSVB 9320						T	N	D	L	K	L	1200
RSVB strain B1						T	N	D	L	K	L	1200
	1,220	1,240	1,260	1,280	1,300							
RSVA Memphis-37	ELSKYVRERS	WLSLNI VGT	SPS IMYTMDI	KYTTSTIASG	IIIEKYNVNS	LTRGERGPTK	PWVGSSTQEK	KTMPVYNRQV	LTKQRDQID	LLAKLDWVYA	1300	
RSVA Nashville											1300	
RSVA Denver											1300	
RSVA Milwaukee				S							1300	
RSVA VR-26 Long											1300	
RSVA A2				S							1300	
RSVB Dallas			F				G				1300	
RSVB Milwaukee			F				G				1300	
RSVB 9320			F								1300	
RSVB strain B1			F								1300	
	1,320	1,340	1,360	1,380	1,400							
RSVA Memphis-37	SIDNKDEFME	ELSIGTLGLT	YEKAKKLFQ	YLSVNYLHRL	TVSSRPCEFP	ASIPAYRRTN	YHFDTSPINR	ILTEKYGDED	IDIVFQNCIS	FGLSLMSVVE	1400	
RSVA Nashville											1400	
RSVA Denver											1400	
RSVA Milwaukee											1400	
RSVA VR-26 Long											1400	
RSVA A2											1400	
RSVB Dallas	V	T	S					H	V		1400	
RSVB Milwaukee	T	T	S					H	L		1400	
RSVB 9320	T	T	S					H	V		1400	
RSVB strain B1	T	T	S					H	V		1400	
	1,420	1,440	1,460	1,480	1,500							
RSVA Memphis-37	QFTNVCPNRI	ILIPKLN EIH	LMKPPIFTGD	VDIHLKQVI	QKQHMFLPKD	ISLTQYVELF	LSNKTLKSGS	HVNSNLI LAH	KISDYFHNTY	ILSTNLAGHW	1500	
RSVA Nashville											1500	
RSVA Denver	A							N			1500	
RSVA Milwaukee											1500	
RSVA VR-26 Long											1500	
RSVA A2											1500	
RSVB Dallas	I			I			A	I	V	M	A	1500
RSVB Milwaukee	I			I			A	I	V	M	A	1500
RSVB 9320	I			I			A	I	V	M	D	1500
RSVB strain B1	I			I			A	N	V	M	A	1500

L protein

	1,520	1,540	1,560	1,580	1,600													
RSVA Memphis-37	ILIIQLMKDS	KGIFEKDWGE	GYITDHMFIN	LKVFFNAYKT	YLLCFHKGYG	RAKLECDMNT	SDLLCVLELI	DSSYWKSMSK	VFLEQVKIYK	ILSODASLHR	1600							
RSVA Nashville	.	.	.	.	.	.	.	.	.	.	1600
RSVA Denver	.	.	.	.	S	.	.	.	.	S	1600
RSVA Milwaukee	.	.	.	.	.	K	.	.	.	.	1600
RSVA VR-26 Long	.	.	.	.	.	K	.	.	.	.	1600
RSVA A2	.	.	.	.	.	K	.	.	.	.	1600
RSVB Dallas	.	.	.	N	.	R	.	.	.	VN	T	1600						
RSVB Milwaukee	.	.	.	N	.	R	.	.	.	VN	T	1600						
RSVB 9320	.	.	.	N	VN	T	1600						
RSVB strain B1	.	.	.	N	VN	T	1600						
	1,620	1,640	1,660	1,680	1,700													
RSVA Memphis-37	VKGCHSFKLW	FLKRLNVAEF	TVCPVWVNID	YHPTHMKAIL	TYIDLVRMGL	INIDRIYIKN	KHKFNDEFYT	SNLFYINYNF	SDNTHLLTKH	IRIANSELEN	1700							
RSVA Nashville	.	.	.	.	.	.	.	.	.	.	1700
RSVA Denver	.	.	.	.	.	.	.	.	.	C	1700
RSVA Milwaukee	.	.	.	.	.	.	H	.	.	.	1700	
RSVA VR-26 Long	.	.	.	.	.	.	H	.	.	.	1700	
RSVA A2	.	.	.	.	.	.	H	.	.	.	1700	
RSVB Dallas	I	.	N	K	.	S	.	V	KLT	N	S	Q	D	1700				
RSVB Milwaukee	I	.	N	K	.	S	.	V	KLT	N	S	Q	D	1700				
RSVB 9320	I	.	N	K	.	S	.	V	KLT	N	S	Q	D	1700				
RSVB strain B1	I	.	N	K	.	S	.	V	KLT	N	S	Q	D	1700				
	1,720	1,740	1,760	1,780	1,800													
RSVA Memphis-37	NYNKLYHPTP	ETLENILTNP	VKCDKKTLN	DYCIIGNVDS	IMLPLLSNKK	LIKSTMI	R	TNYS	KODLYN	LFPTVVIDKI	IDHSGNTAKS	NQLYTTTSHQ	1799					
RSVA Nashville	R	.	.	.	1799					
RSVA Denver	S	.	.	R	.	.	.	1799					
RSVA Milwaukee	.	.	A	.	I	SN	.	.	.	M	R	.	1799					
RSVA VR-26 Long	.	.	A	.	I	SN	.	.	.	M	R	.	1799					
RSVA A2	.	.	A	.	I	SN	.	.	.	M	R	.	1799					
RSVB Dallas	.	.	SLI	.	SNRRNKPK	-F	SG	TE	M	TSTFF	M	H	VTT	F	R	A	R	1799
RSVB Milwaukee	.	.	SLI	.	SNRRNKPK	-F	SG	TE	M	TSTF	M	Q	VTT	F	R	.	E	1799
RSVB 9320	.	.	MSLI	.	SNNSNKPK	-S	SG	TE	M	TSTF	M	H	VTT	F	R	.	I	1799
RSVB strain B1	.	.	SLI	.	SNNSNKPK	-F	SG	TE	M	STF	M	H	VTT	F	.	N	R	1799
	1,820	1,840	1,860	1,880	1,900													
RSVA Memphis-37	ISLVHNSTSL	YCMPLWHHIN	RNFVFSSTG	CKISIEYILK	DLKIKDPNCI	AFIGEGAGNL	LLRTVVELHP	DIKYIYRSLK	DCNDHSLPIE	FLRLYNGHIN	1899							
RSVA Nashville	.	.	.	.	.	.	.	R	.	.	1899
RSVA Denver	.	.	.	.	.	.	.	R	.	.	1899
RSVA Milwaukee	.	.	.	.	.	.	.	R	.	.	1899
RSVA VR-26 Long	.	.	.	.	.	.	.	R	.	.	1899
RSVA A2	.	.	.	.	.	.	.	R	.	.	1899
RSVB Dallas	T	.	R	.	A	.	.	.	.	.	1899		
RSVB Milwaukee	T	.	R	.	A	.	.	.	.	.	1899		
RSVB 9320	T	.	R	.	A	.	.	.	.	.	1899		
RSVB strain B1	T	.	R	.	A	.	.	.	.	.	1899		
	1,920	1,940	1,960	1,980	2,000													
RSVA Memphis-37	IDYGENLTIP	ATDATNNIHW	SYLHIKFAEP	ISLFCDAEL	PVTVNWSKI	I	IEWSKHVRKC	KYCSSVNKCT	LIVKYHAQDD	IDFKLDNITI	LKTYVCLGSK	1999						
RSVA Nashville	A	I	.	.	.	1999						
RSVA Denver	N	.	1999						
RSVA Milwaukee	1999						
RSVA VR-26 Long	S	.	.	M	.	1999						
RSVA A2	1999						
RSVB Dallas	S	.	.	M	.	1999						
RSVB Milwaukee	I	.	.	A	.	R	I	A	1999			
RSVB 9320	I	.	.	A	.	R	I	A	1999			
RSVB strain B1	I	.	.	A	.	R	I	A	1999			

Variable region

L protein

		2,020		2,040		2,060		2,080		2,100	
RSVA Memphis-37	LKGSEVYLVL	TIGPANVFPV	FNVVQNAKLI	LSRTKNFIMP	KKADKESIDA	NIKSLIPFLC	YPITKKGINT	ALSKLKSVVS	GDILSYSIAG	RNEVFSNKLI	2099
RSVA Nashville	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2099
RSVA Denver	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2099
RSVA Milwaukee	.....	.....I.....	.....	.....	.....	.....	.....	.....	.....	.....	2099
RSVA VR-26 Long	.....	.....I.....	.....	.....	.....	.....	.....	.....	.....	.....	2099
RSVA A2	.....	.....I.....	.....	.....	.....	.....	.....	.....	.....	.....	2099
RSVB Dallas	.....	.....IL.....	.....D.....	.....	.....I.....	.....G.....	.....N.K.....	.....S.....N.....	.....	.....	2099
RSVB Milwaukee	.....	.....IL.....	.....D.....	.....	.....I.....	.....	.....N.K.....	.....S.....N.....	.....	.....	2099
RSVB 9320	.....	.....SIL.....	.....	.....	.....T.....	.....	.....K.....	.....S.....N.....	.....	.....	2099
RSVB strain B1	.....	.....IL.....	.....D.....	F.....	.....T.....	.....	.....K.....	.....S.....N.....	.....	.....	2099
		2,120		2,140		2,160					
RSVA Memphis-37	NHKHMN I LKW	FNHVLNFRST	ELNYNHLYMV	ESTYPYLSEL	LNSLTTNELK	KLIKITGSLL	YNFHNE *	2166			
RSVA Nashville	.....	.....	.....	.....	.....	.....	.....	- 2165			
RSVA Denver	.....	.....	.....	.....H.....	.....	.....	.....N.....	- 2165			
RSVA Milwaukee	.....	.....	.....	.....	.....	.....	.....	- 2165			
RSVA VR-26 Long	.....	.....	.....	.....	.....	.....	.....	- 2165			
RSVA A2	.....	.....	.....	.....	.....	.....	.....	2166			
RSVB Dallas	.....	LD.....A.....	.....I.....	.....	.....	.....V.....	.....LL..Q.....	2166			
RSVB Milwaukee	.....	L.....A.....	.....I.....	.....	.....	.....V.....	.....LP..Q.....	2166			
RSVB 9320	.....	LD.....A.....	.....I.....	.....	.....	.....V.....	.....LP..Q.....	2166			
RSVB strain B1	.....	LD.....A.....	.....I.....	.....	.....	.....V.....	.....LP..Q.....	2166			