

N-TERMINAL DOMAIN:

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RVA SA11	172	IVAST-INK-YGVP	PRHNAKRYEYDVMK-DKPY	YLVTWANSSIEMLMSVFSHD---DYLI
RVC Bristol	181	IIAAT-INK-YGMP	PRHNTRYRYEWETMK-NKPY	HLAAWINSSIEMIACVVDHH---TYMI
RVD 05V0049	170	YVAST-VSH-YGIP	VHNQKYRYDYKEMY-NKPY	YLVPWANSSIEMIFAVSSHE---LYLV
RVF 03V0568	177	IVAST-LHH-YGIP	PRHDSKYRYTYEQMR-DKPY	YIVPWANSAIEMLSVNNHD---DFVI
RVB Bang373	216	IQKCF-SEG-YLEM	SRDRKWNHTLDELN-NSRF	HLYNAKIIHAACAMISLAHS---DHID
RVB DB176	213	TINQS-YSEGY	LELSLDRKWSHTIEQLR-KST	FRLYNTKVIHAACAMVSLIHA---SSII
RVG 03V0567	220	IEG---Y---	LELERNRKSMTIKELK-EAN	FRMYNAKIIHAACAMISILHS---KRII
RVH B219	219	IIKTNVNG-YLE	ILPNRKWSHSLADLRENKSI	MMYSAKIIHASCAMISILHAVP
RVH J19	220	IRTNV-VNG-YLE	ILPNRKWSHSLADLRENKSI	MMYSAKIIHASCAMISILHAVP

POLYMERASE DOMAIN:

RVA SA11	330	FHVGF	FRKQKMLDAALDQLKTEY	TENVDD	EMYREY	TMLIR	DEVV	KMLEE	PKVHDD	HLLR-D
RVC Bristol	336	FHVGY	RKQALSDAVYDQITV	YSDNVN	MEMYKEYS	ERIENE	IF	TILKDK	IIHED	KRLE-E
RVD 05V0049	325	FHVGY	RKQMLDAVTDQLS	IEYSD	TFDKM	YNMYT	NNI	KI	I	DDMLR
RVF 03V0568	332	FHVGY	RKQMLQDAVQDQ	LSVEY	SENVDK	TM	YDEY	NY	I	KEDY
RVB Bang373	374	FHVGH	RIDNAQDAITDQV	TATY	TS	DI	RE	YD	NY	YRL
RVB DB176	372	FHVGH	RIDNAQDAIIDQV	TAP	YTTD	V	RE	YD	I	Y
RVG 03V0567	373	FHVGH	RIDNSQDAIQDQV	TVEY	TTK	V	RE	YD	M	Y
RVH B219	380	FHVGH	RIDNPQDAIEAQV	KVEY	TS	D	V	K	E	Y
RVH J19	380	FHVGH	RIDNPQDAIEAQV	KVEY	TS	D	V	K	E	Y

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RVA SA11	389	SEL	AGLLSMSSASNGES	RQLK	FRKTI	FST	KKNM	HVMDD	MANERY	TPGI	IPP	VNV	DKP	IP
RVC Bristol	395	YEL	SALLSMSSASNG	ILRE	IN	FG	GQ	KVR	ST	KKNM	H	V	IDD	IY
RVD 05V0049	384	AEI	AGLLSMSSASNG	ESRVI	KFR	RT	V	R	ST	KKNM	H	V	M	D
RVF 03V0568	391	HEL	AGLLSMSSASNG	KMEI	KFG	S	K	L	F	T	R	K	N	M
RVB Bang373	434	VTA	ESLSALANSSNG	F	SKE	V	T	F	I	D	R	K	I	K
RVB DB176	432	VTA	ESLSALANSSNG	F	SKE	V	L	F	I	D	R	K	I	K
RVG 03V0567	433	VTV	PSLASLANTSNG	K	T	I	E	V	F	V	G	R	K	I
RVH B219	440	VTA	ESLAAMANSNG	YSR	S	V	T	F	I	D	R	E	I	K
RVH J19	440	VTA	ESLAAMANSNG	YSR	S	V	T	F	I	D	R	E	I	K

Motif F

Priming Loop

RVA SA11	449	L	G	R	R	D	V	P	G	R	R	T	R	I	F	I	L	P	Y	E	F	I	A	Q	H	A	V	E	K	M	L	I	Y	A	K	H	T	R	E	Y	A	E	F	Y	S	Q	S	N	Q	L	L	S	Y	G	D						
RVC Bristol	454	L	G	R	R	D	V	P	G	R	R	T	R	A	I	F	I	L	P	Y	Q	F	I	A	Q	H	S	F	A	E	I	M	L	N	Y	A	K	R	E	R	E	Y	S	E	F	Y	S	Q	A	N	Q	V	L	S	Y	G	D				
RVD 05V0049	443	L	G	R	R	D	V	P	G	R	R	T	R	V	I	F	I	L	P	Y	P	F	I	A	Q	H	S	V	V	E	L	L	R	E	S	K	H	I	K	E	F	S	E	F	Y	S	Q	S	S	Q	L	L	S	Y	G	D					
RVF 03V0568	451	L	G	R	R	D	V	P	G	R	R	T	R	V	I	F	I	L	P	Y	E	F	I	A	Q	H	A	I	V	E	L	L	L	K	Q	A	K	H	T	R	E	F	S	E	F	Y	S	S	A	N	Q	L	L	S	Y	G	D				
RVB Bang373	491	M	G	T	R	N	V	P	A	R	Q	T	R	G	I	F	I	L	P	W	Q	V	A	A	I	Q	H	T	I	A	E	S	L	Y	K	R	A	K	K	G	S	Y	Q	G	S	F	A	E	A	Y	T	A	K	T	A	S	L	T	Y	G	V
RVB DB176	489	M	G	T	R	N	V	P	A	R	Q	T	R	G	I	F	I	L	P	W	Q	V	A	A	V	Q	H	T	I	A	E	S	L	Y	K	T	A	K	K	G	A	Y	Q	G	S	F	A	E	A	Y	T	A	K	T	A	S	L	T	Y	G	V
RVG 03V0567	491	M	G	T	R	N	V	P	A	R	Q	T	R	G	I	F	I	L	P	W	Q	V	A	A	V	Q	H	T	I	A	E	T	M	Y	K	R	A	K	K	G	A	Y	R	G	A	F	A	E	A	Y	T	A	K	A	A	S	L	T	Y	G	V
RVH B219	498	M	G	T	R	N	V	P	A	R	Q	T	R	G	I	F	I	L	P	W	Q	V	A	A	I	Q	H	T	I	A	E	F	L	Y	K	K	A	K	K	G	G	F	G	A	T	F	A	E	A	V	S	K	A	A	T	L	T	Y	G	I	
RVH J19	498	M	G	T	R	N	V	P	A	R	Q	T	R	G	I	F	I	L	P	W	Q	V	A	A	I	Q	H	T	I	A	E	F	L	Y	K	K	A	K	K	G	G	F	G	A	T	F	A	E	A	V	A	K	A	A	T	L	T	Y	G	I	

Motif A

RVA SA11	506	V	T	R	F	L	S	N	N	T	M	V	L	Y	T	D	V	S	Q	W	D	S	Q	H	N	T	Q	F	R	K	G	I	I	M	G	L	D	I	L	A	N	---	---	M	T	N	D	---	---	A	K	V	L	Q	T					
RVC Bristol	511	V	T	R	L	D	S	N	S	I	L	C	F	T	D	V	S	Q	W	D	S	Q	H	N	T	K	V	L	R	R	S	I	I	R	A	M	K	R	L	K	Q	---	---	L	T	H	N	---	---	I	N	I	H	K	A					
RVD 05V0049	500	T	N	R	Y	L	N	Q	S	T	I	I	V	Y	A	D	V	S	Q	W	D	S	S	K	H	N	T	P	L	R	N	A	I	L	K	A	I	E	Q	L	K	S	---	---	Y	T	T	N	---	---	E	K	V	I	T	A				
RVF 03V0568	508	T	M	R	E	L	N	P	S	T	I	I	Y	T	D	V	S	Q	W	D	S	Q	H	N	T	Q	F	R	K	A	I	M	A	M	A	Q	D	L	Q	A	---	---	Y	T	T	D	---	---	Q	N	V	E	R	A						
RVB Bang373	551	L	A	E	D	T	S	K	A	T	K	I	I	L	Y	T	D	V	S	Q	W	D	S	Q	H	N	T	E	P	Y	R	S	A	W	I	N	A	I	R	E	A	R	S	E	M	K	W	L	S	D	E	P	I	V	L	N	M	N	V	
RVB DB176	549	L	A	E	D	T	S	K	A	M	K	I	I	L	Y	T	D	V	S	Q	W	D	S	Q	H	N	T	E	P	Y	R	S	A	W	I	N	A	I	K	Y	L	R	E	E	G	R	W	L	K	E	N	E	P	R	M	L	G	I	N	V
RVG 03V0567	551	L	A	Q	D	T	S	T	A	E	K	I	I	L	Y	T	D	V	S	Q	W	D	S	Q	H	N	T	E	P	Y	R	S	A	W	I	N	A	I	D	E	A	R	E	E	L	A	M	P	R	S	L	E	P	K	V	L	E	M	N	V
RVH B219	558	L	A	E	A	T	S	K	A	D	Q	L	I	L	Y	T	D	V	S	Q	W	D	S	Q	H	N	T	E	P	Y	R	S	A	W	I	N	A	I	K	E	A	R	T	K	Y	K	I	N	Y	N	Q	E	P	V	V	L	G	M	N	V
RVH J19	558	L	A	E	A	T	S	K	A	D	Q	L	I	L	Y	T	D	V	S	Q	W	D	S	Q	H	N	T	E	P	Y	R	S	A	W	I	N	A	I	K	E	A	R	T	K	Y	K	I	N	Y	N	Q	E	P	V	V	L	G	M	N	V

* * Motif B

RVA SA11	558	LNLYKQTQINLMDSYVQIPDGNVIK---K-IQY	GAVASGEKQTKAANSIANLALIKTVLS
RVC Bristol	563	INIIYIQSQENLENSYVLIDK----K---A-IQY	GATASGEKQTKIMNSIANKALIQTVLG
RVD 05V0049	552	LNNYALTQMKLKNSFVTIGN----K---V-LOY	GAVASGEKQTKLMNSIANLALITTVIN
RVF 03V0568	560	LNKYETQRQLMNSYVTIDD----K---I-IQY	GAVASGEKQTKIANSIANLALIKTVLN
RVB Bang373	611	LDSMIKIQEYLLNSNLIVASPGSOR-PLKIIRY	HGVASGEKTTKIGNSFANVALIETVLD
RVB DB176	609	LDAMSSIQESLLNSTLIVTSTRSNRNAL-TIRY	HGVASGEKTTKVGNSFANVALIETVLD
RVG 03V0567	611	LDKMKIEIQKALLNSDLIIESPGSQREPLK-IRY	HGVASGEKTTKIGNSFANVALINTVFN
RVH B219	618	LDKMIIEIQEALLNSNLIVESQGSKRQPLR-IKY	HGVASGEKTTKIGNSFANVALITTVFN
RVH J19	618	LDKMIIEIQEALLNSNLIVESQGSKRQPLR-IKY	HGVASGEKTTKIGNSFANVALITTVFN

		Motif C	Motif D	
RVA SA11	614	RISNKH-SFATKIIRVDGDDNYAVLQF	NTEVTKQMIQDVSNDVRETYARMNAVK	KALVST
RVC Bristol	615	KLMTDYT-FDVKMIRVDGDDNYAIVRF	PIAITEKLLSEFTSKLRSYSEMNVKV	KALASL
RVD 05V0049	605	YLNVGES-YRIKIIIRVDGDDNYFIMEF	DRKVDKQLVTVSNVAKDTYGRMDVKV	KALTAT
RVF 03V0568	612	KLSAKYT-FNFKLIRVDGDDNYTVIES	RSQVTQELLSNLSKDIKDTYALMNVK	KALVST
RVB Bang373	670	SVKQEIPIEIVTHLRVDGDDNVVSLT	SCQI---S--KLQETVKRAYSKLNARV	KALASY
RVB DB176	668	VTKQQIPDIEITHLRVDGDDNVVSMNT	--SC--NISKLQSVIKSNYQKLNARV	KALASY
RVG 03V0567	670	KVAERIPDIRVTHMRVDGDDNVVTMYT	---SC--KIEELQKEIKDAYTQMNA	RVKALASW
RVH B219	677	NLTNTMPSIRVNHMRVDGDDNVVTMYT	---AN--RIDEVQENIKEKYKRMNA	KVKALASY
RVH J19	677	NLTNTMPSIRVNHMRVDGDDNVVTMYT	---AN--RIDEVQENIKEKYKRMNA	KVKALASY

		Motif E	**	
RVA SA11	673	VGIEIAKRYIAGGKIFFRAGINLLNNEK	---RGQSTQWDQAAILYSNYIVNRL	RGFETD-R
RVC Bristol	674	TGCEIAKRYVAGGMLFFRAGVNILHHEK	---RNQDSAYDMAATLYANYIVNAL	RGLTMS-R
RVD 05V0049	663	TGLEMAKRYIAGGRLFFRAGVNILNNEK	---RHTTTYDQAIIYANYLVNKM	RGYNME-R
RVF 03V0568	671	TGLEMAKRYIAGGRIYFRAGINILNNEK	---RNQQTAWDQAAILYASYTVN	KLRFITN-R
RVB Bang373	725	TGLEMAKRFIVCGKIFERGAIPIFTAERP	YGTDVSIQSMCGSSIYSSA-VNAY	RGFGDSYF
RVB DB176	723	TGLEMAKRFIICGNIFERGAIPIFTAERP	YGTDVSIQSMGSSIYSSA-VNAY	RAFGDGYL
RVG 03V0567	725	TGLEMAKRFIICGKIFERGAISIFTAERP	YGTDVSIQSMGASLYSAA-VNAY	RGFGETYR
RVH B219	732	TGLEMAKRFIICGKIFERGAISIFTAERP	YGTDLVQSTTGSLIYSSA-VNAY	RGFGDDYL
RVH J19	732	TGLEMAKRFIICGKIFERGAISIFTAERP	YGTDLVQSTTGSLIYSSA-VNAY	RGFGDNYL

RVA SA11	730	EFILTKI-MQMTSVAITGSLRIFPSERVL	--TTNSTFKV----FDEDFIIEY	GTT
RVC Bristol	731	TFILTKI-CQMTSIIKITGTLRIFPMKSIL	--ALNSAFKV----FDEVDYVIN	YPIIS
RVD 05V0049	720	IFILCKI-MQMTSVKITGSLRIFPASLML	--TTNSPYKV----FDDVDFVQ	TYNSS
RVF 03V0568	728	TFILTKI-MQMTSVKISGVLRIFPASDVL	--TLNSTYKV----FDEVDYAVN	YKVD
RVB Bang373	785	AFMQDVLVPPSSVRITGRLRVLLSPVTLY	ATGPLSFEITPQGLGGRCRM	YTO-SE
RVB DB176	783	DFMMDVLVPPSSTVRLTGRRLRVLLSPIT	LFATGPLSFEVTQNGLGGR	CRLYT--KN
RVG 03V0567	785	KFMEDVLIPPSASTKITARLRVLLSPITL	HSIGPLGYEITPGGLGGR	MR-HFADKI
RVH B219	792	NFMTDVLVPPSASVKITGRLRSLLSPVTLY	STGPLSFEITPYGLGGR	MRLFSLSKE
RVH J19	792	NFMTDVLVPPSASVKITGRLRSLLSPVTLY	STGPLSFEITPYGLGGR	MRLFSLSKE