

### 8- to 10-stranded Longest Alignment, IntNum 1356

3qra A	2	EGESSISIGYAQSRV	KEDGYKL	DKNPR...GFNLKYRYEF	NND..WGVIGSFAQTRRGFE	56
2vdf A	7	ANETVHTDLSSISST	RAF..L	KEKHKAACHIGVRADI	PFDA	64
3qra A	57	ESVDG.....FK.LI	DGDFKYYSVTAGPVFRI	..NE..	YVSLYGLLGAGHGKAKFS	102
2vdf A	65	NLETDENKLGK	TKNVKLPTGVPENRIDLYTGYTYTQ	TLSDS	LNFRVGAGLGFESSKDSIK	124
3qra A	103	S.IFGQSESRSKTSLAYGAGLQFN	PHP	NFVIDASYEY	138	
2vdf A	125	TTKHTLHSSRQSWLAKVHADLLS	QLGNGWYINPWSEV	161		

### 8- to 12-stranded Longest Alignment, IntNum 703

2maf A	8	GPYVQADL	AYAYEHITHDYPEPTAPNKNKISTVSDYFRNIRTRSVHP	RVSVGYD	FG...G	64
1uyn X	120	IGYLGKLF	SYGRYKNSISRST	G	EHAEGSVNGTLMQLGALGGV	170
2maf A	65	WRIAADYA	.RYRKWNNNKYSVNIENVRIRKENGIRIDRKTENQE	.NGTFHA.	VSSLGLSA	121
1uyn X	171	GDLTVEGGLRYDLLKQDAFAEK	GSAL.....G	WSGNSLTEGTLVGLAGLKL		216
2maf A	122	IYDFQINDKFK	KPYIGARVAYGH	VRHSIDSTKKTIEVTTVPSNAPNGAVTTYNTDPKTQND		181
1uyn X	217	SQPLIS..DK	AVLFATAGVER	DLNGRDYTVTGG...F.....TGATAATGK		256
2maf A	182	YQSNSIRRV	GLGVIAGVGFDITP	KLTL DAGYRYHN	WGRLNTRFKTHEA	238
1uyn X	257	TGARMPHT	RLVAGLGADV	EFGNGW	NGLARYSYA.GSK....QYG	308

### 8- to 14-stranded Longest Alignment, IntNum 1494

2x27 X	4	GHKAGD	FIIRGGFATVDPDDSSSDIK	LDGAKQRGT	KATVDSDTQLGLTFTY..MFAD.KW	60
4d5b A	162	NDYNM	GFYSNLEYLLSKEDRNAW.....G	KRQEQGYSALFKPKYKRF	GNWEV	207
2x27 X	61	GVELVAATPFNHQVDV	KGLGPGLD	GKLADIKQLPPTLLLQYY	PMGGTNSAF	120
4d5b A	208	GVEFYQIKT.NDEK	QPDG...TINEKSDFNERYIEPIVQYS	FD....DAG	TLYTRVRVG	259
2x27 X	121	YTTFFDED	LASNKRAQGFSSMKLQDSWGLA....GELGFDYMLNE	HALFNMAVWYMDID		175
4d5b A	260	KNETKNTDRS.....GGGNAGI	NYFKDIRKATVGYEQST	GES	WVAKAEYAYANEV	309
2x27 X	176	TKAS.INGPSALGVNK	TKVDVDVDPWVYMIGFGYKF	210		
4d5b A	310	EKKSR	LSG.....WEARNK	SELTQHTFYAQAALYRF	339	

### 8- to 16-stranded Longest Alignment, IntNum 529

1qj8 A	3	STVTGGYAQSDA	QGG.....Q	MNKMGGFNLKYRYE	EDNSPL	54
5fvn A	188	FGIGTAVSSSK	RRTSSQNDLTYGNGDRA	AEITYTGGLKYD	ANN...IYLAAQYTQTYNATRVG.	244

1qj8 A	55	GD	YNKNQYYGITAGPAYRI	ND	WASIYGVVGVGYGKFQTT	EYPTYK	NDTSDYGFSGYAGLQ	114
5fvn A	245	NL	GWANKAQNFVVAQQY	Q	FDFGLRPSVA..YLQSKGK	DLEN...GYGD	QDLLKYVDVGAT	299

  

1qj8 A	115	F	NPMENVALDFSIEQSR	IRS.....VD	VGTWIAGVGYRF	148
5fvn A	300	Y	YFNKNMSTYVDYKINL	LDDKEFTRNAGISTDD	I VALGLVYQF	342

#### 10- to 12-stranded Longest Alignment, IntNum 1348

2vdf A	30	H	KAAKHIGVRADIP	FDAN	NQ	GIRLEAGFGRS	KKNINLETDE	NKL	GK	T	KNVKLPTGVPENR	89
3aeh A	105	K	TKSWGGGFYASGI	FRSGA	Y	FDVIAKYIH	NENKYD	LNFA.....GAGK	Q	N	FRSHS	154

  

2vdf A	90	.	IDLYTGYTYTQ	TLSDS	L	NFRVGAGLGFESSKDS	IKTTK...HTL	H	S	.	SR.QSWLAKV	141
3aeh A	155	L	YAGAEVGYRYH..	LTD	T	TFVEPQAE	L VWGRLQGQ	TFNWNDSGMDVSMRRNS	V	N	PLVGRT	212

  

2vdf A	142	H	ADLLSQLGN.GW	YINPWSEVKFDLNSRYKLN	T	GV	TNLK	KD	I	.	NQKTNGWGFG	LGANIGK	199
3aeh A	213	G	VVSGKTFSGKDW	S	L	TARAGLHYEFDL	TDSADVHLKDAAGEHQINGRK	D	S	R	MLYGVGLNA	272	

  

2vdf A	200	K	LGESA	S	I	EAGPFYK	214								
3aeh A	273	R	FGD	N	T	R	L	G	L	E	V	E	R	S	287

#### 12- to 14-stranded Longest Alignment, IntNum 712

1uyn X	39	N	G	T	G	L	R	V	I	A	Q	T	Q	D	G	G	T	W	E	Q	G	G	V	E	G	K	M	R	G	S	T	Q	T	V	G	I	A	A	K	T	..	G	E	N	T	T	A	A	A	T	L	G	M	G	R	S	T	W	S	96	
2x9k A	39	A	N	G	P	W	R	I	A	L	A	Y	Y	Q	E	G	P	.	V	D	Y	S	A	G	K	R	G	T	W	F	D	R	P	E	L	V	H	Y	Q	F	L	E	N	D	D	F	S	F	G	L	T	G	G	F	R	N	Y	G	Y	H	97

  

1uyn X	97	E	N	..	S	A	..	N	A	K	T	D	S	I	S	L	F	A	G	I	R	H	D	A	G	D	I	G	Y	L	K	G	L	F	S	Y	G	R	Y	K	N	S	I	S	R	S	T	G	A	D	E	H	A	E	G	S	V	N	G	152
2x9k A	98	Y	V	D	E	P	G	K	D	T	A	N	M	Q	R	W	K	I	A	P	D	W	D	V	K	L	T	D	L	R	F	N	G	W	L	S	M	Y	K	F	A	N	D	L	N	.....	T	T	G	Y	A	D	148							

  

1uyn X	153	T	L	M	Q	L	G	A	L	G	G	V	N	V	P	F	A	A	T	G	D	L	T	V	E	G	G	L	R	Y	D	L	L	Q	D	A	F	A	E	K	G	S	A	L	G	W	S	G	N	S	L	T	E	G	T	L	V	G	L	A	212
2x9k A	149	T	R	..	V	E	T	E	T	G	L	Q	Y	T	F	N	E	T	V	A	L	R	V	N	Y	Y	L	E	R	.....	G	F	N	M	D	D	.....	S	R	N	N	G	E	F	S	T	Q	E	I	R	A	195									

  

1uyn X	213	G	L	K	L	S	Q	P	L	S	D	K	A	V	L	F	A	T	A	G	V	E	R	.	D	L	N	G	R	D	Y	T	V	T	G	G	F	T	G	A	T	A	T	G	K	T	G	A	R	N	M	P	H	T	R	L	V	A	G	L	271
2x9k A	196	Y	L	P	L	T	L	G	.	N	H	S	V	T	P	Y	T	R	I	G	L	D	R	W	S	N	W	D	W	Q	.....	D	.....	D	I	E	R	E	G	A	D	F	N	R	V	G	L	238													

  

1uyn X	272	G	A	D	V	E	F	G	N	G	W	N	G	L	A	R	Y	S	Y	A	G	S	K	Q	....	Y	G	N	H	S	G	R	V	G	V	G	Y	R	F	308			
2x9k A	239	F	Y	G	Y	D	F	Q	N	G	L	S	V	S	L	E	Y	A	F	E	W	Q	D	A	E	G	D	S	D	K	F	H	Y	A	G	V	G	V	N	Y	S	F	280

#### 12- to 16-stranded Longest Alignment, IntNum 1395

2wjr A	27	N	G	W	W	A	S	M	E	S	N	T	W	N	T	I	H	D	N	K	K	E	N	A	A	L	N	D	V	Q	V	E	V	N	Y	A	I	K	L	D	D	Q	W	T	V	R	P	G	M	L	T	H	F	S	.....	80			
3nsg A	147	D	G	L	S	F	G	I	Q	Y	Q	G	K	N	Q	D	N	H	S	.	I	N	S	Q	N	G	D	G	V	G	Y	T	M	A	Y	E	F	...D	G	F	G	V	T	A	A	Y	S	N	S	K	R	T	N	D	Q	Q	D	R	202

  

2wjr A	81	.	.	.	N	G	T	R	G	P	Y	V	K	L	S	W	D	A	T	K	D	L	N	F	G	I	R	Y	R	Y	D	W	K	A	Y	R	Q	Q	D	L	..	S	G	D	M	S	R	D	N	V	H	R	W	D	G	Y	V	T	Y	135	
3nsg A	203	D	G	N	G	D	R	A	E	S	R	A	V	G	A	K	Y	D	A	N	.	N	V	Y	L	A	A	V	Y	A	E	T	R	N	M	S	I	V	E	N	T	V	T	D	T	V	E	M	A	N	K	T	Q	N	L	E	V	V	A	Q	261

2wjr A	136	HINSD	FTFAWQTTLYS	KQNDYRYANHKKW	ATENAFVLQY	HMTDPDI	TPYIEYDYLD	RQGVY	195
3nsg A	262	QFDF	GLRPAISYVQSKGK	QLNGAGGS	ADLAKYIQAGATYY	FNK	NMNVWVDYRFNLL	DEND	321
2wjr A	196	N.GRDNLS	ENSYRIGVSE	KL					214
3nsg A	322	YSSSYVGTDD	QAAVGITYQF						341

#### 14- to 22-stranded Longest Alignment, IntNum 1859

3bry A	134	LVLRVFSAAYHVT	DKLTVGASVD	AVTSLNLGTL	LDVSQIGTL	AGQGRVSGTL	VPTLLG		193
5fok A	424	KTSAAYVFD	TLKLSE	QWELNLGLRYDD	FDTKSSGYQ	TAGRN	.....		464
3bry A	194	VPGL	SGGYIDFSRNAPVGGGVQAWGIGGRLGLTYQVTP		DTRIGAAYQAKTHVGD	LTGQAT			253
5fok A	465	GP...A	GYFK.....	RENNSHFWNYQTGLVYK	PAP	NGSIYLAWSTSS	NPTGETG...		510
3bry A	254	LSAV	SSVAGNIPLKGDVTVRN	FQMPAQLTVGISHQFN.DQ	LSVSADYQRFVSSVMKDMN				312
5fok A	511	GEGQAD....I.SVGNN.GLDPER	NRNLELGTKWAF	FDD	ALSLNAALFR	TDKT	NARVASP		564
3bry A	313	VG	FVQSGSAANLDSL	PLQNYRDISVFGIGAERYN	NAK	WTFRGGFH	YAEIPGNM....L		368
5fok A	565	...DV.....	STLQVLD	GEQRVQGV	ELGFNGKI	TEK	WKVFGGYTYLDSEIRK	STVK	615
3bry A	369	LAVVPATPT	TSLTGGVSYA	IGK	NDVIDFALSVALR			403	
5fok A	616	GNKMPQTA	QNNFTLWTTYD	LLQNF	TIGGGTTYVDK			650	

#### 16- to 18-stranded Longest Alignment, excluding Fig 6, IntNum 2149

3nsg A	9	NKLDL	YGKAVGRHV	TTTTGDS....KN	ADQTYAQIGFKGET	QINTDL	TGFGQWEYRT...		61	
3sys A	7	EDA	KTDLVLRNYYFN	RDFRDHDAGKSL	VDEWAQGFILKFSSGYT	PG.TV	GVGLDAIGLFG		65	
3nsg A	62	.KADR.....AE.....	GEQQNSN	L.VRLAFAGL	KYAEVG	SIDYGRNYG	IVYDVESY		106	
3sys A	66	VKL	NSGRGTSNSELLPLHDDGRAADN	YGRVGVA.AKLRV.S	ASELKIG	EMLPDIPLLR.Y			122	
3nsg A	107	TDM..APY.FSGETWGGAYTDNYMTSR	AGLLTYRN	SDFFGLVD	GLSFGI	QYQGNQDNH			163	
3sys A	123	DDGRLLPQTFRGF.....	AVVSRE..L....	PGLALQ	AGRFDAVSLRN				159	
3nsg A	164	SI.....NSQ	NGDGVGYTMAYE	FD..GFGVTAAYSNS	KRTNDQQDRD	GNGDRAE			210	
3sys A	160	SADMQDL	SAWSAPTQKSD	GFNYAGAEYRFNRE	RTQLGLWHGQLE	D.....	VYR		207	
3nsg A	211	SRAVGAKYDA..N..	NVYLA	AVYAETR	NMSIV	ENTVTD	TVEMANKTQ	NLEVVAQYQ	FD	266
3sys A	208	QSYANLLHKQ	RVGDW	TLGANLGLFVDRD	DGAAR.....AGE	IDSHTVYGLFSAG	IG.L		259	
3nsg A	267	LRPAISYVQSKGK	QLNG.....A.....	GG	ADLAKYIQAGATYY	FN....K	NM		306	
3sys A	260	HTFYLGLQKVGGD	SGWQSVYGSSGRSMGNDMFNGNFTN		ADERSWQVRYDYDF	VGLGW	PGL		319	
3nsg A	307	NVWVDYRFNLLDENDYSSSYVGTDD	QAAVGITYQ					340		
3sys A	320	IGMVR	YGHGSNATTKA..GSGG	KEWERD	VELGYT			351		

# 14- to 16-stranded Longest Alignment, IntNum 1879

3bs0 A	92	DW	RFGAGLFVSSGLGTEY	GSKSFLSQTENGIQTSFD	NSSRL.IVLRAPIGFSY	QATSKLT	150
4y25 A	57	QFSEGGKI	VRDWLAGVEWR	SRNIWLEA..EYA...ERV	FNHEHKPGARLSGWYD	FNDNWR	111
3bs0 A	151		FGASVDLVWTSLNLELLLPS	SQVGALTAQGNLSGGLVPSLAGFVGTG	GAAHFSLSRNSTA		210
4y25 A	112		IGSGLERLSHRVPLRA.....				127
3bs0 A	211		GGAVDAVGWGGRLGLTY	KLTDNTVLGAMYNFKTSVGDLEGKATLSAI	SGDG.A.V..LP.		265
4y25 A	128		.MKNGVTGNSAQAYVRWY	QNERRKYGVSWAF.T...D	FSDSNQ	RHEVSLEGQERIWSSPY	182
3bs0 A	266		LDGDIRVKNFEM..PASLTLGLAHQ	FNE..R	WVVAADIKRAYWGDVMDSMNVAFI	SQLGG	321
4y25 A	183		LIVDFL.PSLYYEQN	TEHD.TPYYNP	IKTFDIVPAFEASHLLW	RSYENSWEQIFSAG.VG	239
3bs0 A	322		IDVALPHRYQDITVASIGTAYKYNN	DLTLRAGYSYA	QQALDSELILPVIPAYL	KRHVTFG	381
4y25 A	240		ASWQKHYGTDVVTQLGYGQRISW	NDVIDAGATLRWEKRPYDGDR.....		EHNLVVEFD	292
3bs0 A	382		GEYDFD				387
4y25 A	293		MTFRFR				298