

# Supplemental Figure 2

z_Ae3	-----MGRSYNEKDFEYHRHTFHHTHPLSTHLP-PQ	RFRKRV-LSM	RRRKRK	47																						
ti_Ae3	MATGGHAPDIDVLINLQQVRVEEDEDG	V-----EDQEEEEENWEKALSVERFADIISDSASTSGDRMGRHYTEKDFEYHRHTFHHMHPLSTHLPV	QRLRKRKRV-HSME	KRRKKK	113																					
fu_Ae3	MATGGHVPEIDVLVNLQQVKEVEDEEGSM-----EEQEEEEENLEKTL	SVERFGDIISDSTSSSSGRMGRNYTEKDFEYHRHSFHHTHPLSTHLP	PLPQRLRKRKRV-HSMD	RRRKRK	113																					
sk_Ae3	MATSGSKDPPRVLT	CSPLAEDEVGPEATEVVGEEEEEEEEEEDEDLDRLLPVDHLGDLLSDLPRPQPE---RTYNEKDFEYHRRSLHIRHPLSARLP	PHVCI	RRRKRKRVHSER	KRRKRK	117																				
z_Ae3	RRKKKTSMPPSDVPTIHEVDEEEAES	IFGQQAATPTEPSEELPQLSLGSEEDLAADLPLSSFHMES-ERPASSEETLPSPASMEEKEET-----QQPPDGGEHKDISNSFSPS			157																					
ti_Ae3	RRKKKTSLPPSDVPTIHEVDEEEAES	TEGQGVAAATPTELPEIQPQFSLGSQEDLGEPLHHTIVHTE	NVEQPLSRKT	T----ALTLIKEAAHNGGITVTGQNDMDGGEAA	CNSVPSGS	229																				
fu_Ae3	RRKKKTSLPPSDVPTIHEVDEEEA	QSDTGGQVAATPTEPPDLQPQFSLGSQEDLEELPLTSFHV	N-E-HLSTGKA	----ASMEIKAE	THNGKIPVVGQNR	EDGEETA	CSSIPPS	227																		
sk_Ae3	RRKKTSLPPSGVTP	TIQEVDEEEHGEGLGSEEEARDKEVS-----ASERTRDSP----TSHLAS-----QEST	----ESLLIERTS	-----TPPEGPMEP	QRESTQSSLDAR	209																				
z_Ae3	PEASMTTRGWFRKRPVH-RLAGAQR	TSYDLRERICIGSMTAMETAVYQKVP	TDEAEAQMLASADLDDMKSHRFEDNPGVRRHLVKKSSRCQLPRSSNGSPPLSSL	KRRKRM-D	KKTHEV	275																				
ti_Ae3	DPSSVTPHGWFRKRPVHRL	LLGTQRSNYDLRERICIGSMTALETAVYQVPT	TDEAEAQMLVSADLDDMKSHRFEDNPGVRRHLVKKSSRCHMSRTS	NSSTPL	CSL	KKKRAEK	KKTHEL	349																		
fu_Ae3	DPSPSSTHSC	FRRRPVHHRMAGAQR	SNYDLRERICIGSMTALETAVYQVPT	TDEAEAQMLASADLDDMKSHRFEDNPGVRRHLVKKSSRCQISRASNS	STPLSSL	KKKRAAD	KKTHEL	347																		
sk_Ae3	DNSPP----	SCAKRRSLH-RTPGAQR	PRYDLQERVICIGSMTASGAAIFQKVP	TDEAEAEMLA	VVDLVYMKSHRFEDHPG	VRRHLVKKPSKGQMSKNTSK	---MHQTGPR	KKSKL	KK	PHEV	321															
z_Ae3	FVELNELIVDKNQEMRWKERARWIK	FEEDVVEETDRWGKPHVASLSFRS	LLELRRITITHGAIMLDDLDQSTLPGIAHLMVETMISDQIR	AEADRANVLRALLLKHSHPNDEKEGLFHRNHS	395																					
ti_Ae3	FVELNELIVEKDHEMRWKERARWIK	FEEDVDEETDRWGKPHVASLSFRS	LLELRRITITHGAILLDLEQSTLPGIAHLVETMISDQI	KAEDRPNVLRALLLKHSHLSDHKT-RFHRHHS	468																					
fu_Ae3	FVELNELIVEKDHEMRWKERARWIK	FEEDVVEETDRWGKPHVASLSFRS	LLELRRITITHGAILLDLEQNSLPGIAHLVETMISDQI	RAEDRPSVLRALLLKHSHPSDLKH-RFHRHQ	466																					
sk_Ae3	FVELNELVVDKNNEMTQ	ETARWIKFEEDVVEETDKWGKPHVASL	TFRSLELRRITIAQGAVLLDLEQKTLPGIAHLVETMISDQI	KAEDRANVLRALLVKHSHPNDEKEGSFFPRTG	441																					
z_Ae3	VTSL-GSFRHNHNHVHDT-----SLPLVSQDHEEMHDSKAAEH	DKE-----KSLHPIPAEGH-AASRSLKLLAKIPKDAEATVVLVGC	VEFLEK	PAMAFVRLNESILLESILE	496																					
ti_Ae3	SGSLHGSF--NHNHVHDT-----NQPLVSEEHDEHHEKGPVYDPKQDV	FSVLSFKSLHPLP-ETHPATARSIKLLAKIPKDAEAVIVLVC	VEFLEQ	PAMAFVRLSEAVLLESVLE	576																					
fu_Ae3	SASLHGSF--NHNHVQDT-----NLPLVTEEHSDGKGPVYDPKQDV	FSVLSFKSLHPLPESPNAARSMKLLAKIPKDAEAVIVLVC	VEFLEQ	PAMAFVRLNEAVLLESVLE	575																					
sk_Ae3	SSSVSSVL--GNHHLHHEHYPSNDQVITLPLMEEERAQSD	SKTLES	SQN-----TARHTSQQSERHMTKSEIKLLRQIPD	NAEATVVLIGTLAFLEQPTMAFVRLSEGVLLDSVLE	552																					
z_Ae3	VPVPIRFIFVLLGPTQTNVDYHEIGRSF	STLMSDKNFHEVAYFADDRQDLLNGINEFLD	CSIVIPPSDVEGKDLLKTVASFQKQMLRKRKERELK	CASTVTGALET	KDVNIEEQEED	616																				
ti_Ae3	VPVVRVRFIFVLLGSPQSNMDYHEIGRSF	STLMSDKNFHEVAYFADDRQDLLNGINEFLDYSIVIPPSDVEGKDLLKTVAD	FQKQMLRKRKERELK	KHSSLI-GVESEIK	EVSP-E	EEEEEG	694																			
fu_Ae3	IPVVRVRFIFVLLGSPQSNVDYHEIGRSF	STLMSDKNFHEVAYFADDRQDLLNGINEFLDYSIVIPPSDVEGKDLLKTVAD	FQKQMLRKRKERELK	HQS	SVL-GIELNNKE	IS	PEEEEEEG	694																		
sk_Ae3	VSVVRFIFVLLGSPQSNIDYHEIGRSISTLMSDKNFHEAAYL	ADDRQDLLNAINEFLD	CSIVIPPLELEGRDLLRSVTSFQKEMLRKRKERELK	SKLKE-ESVLEIK	DMCV-ELRED-	669																				
z_Ae3	QFDVPLKRS	GPIFGGLIHDIRRRYP	PRYISDLKDALD	TQCIAAVIFIFYAALSPTITFGGLLGEK	TQGMG	VS	ELIISTATVGVLS	FSLLAGQPLLIIGFSGPLL	VFE	EAFYK	Q	QAQ	GFE	736												
ti_Ae3	EQEVDPLKRS	GMPFGGLIHDIRRRYP	QYVSDLKDALDMQ	CIAAVIFIFYAALSPTITFGGLLGEK	TEGMG	VT	ELIVSTATIGVIFSLFAGQPL	LITG	SGPLL	VFE	EAFYK	Q	QVY	NFE	814											
fu_Ae3	DQEVDPLKRS	GPIFGGLIHDIRRRYP	PHYVSDLKDALD	TQCIAAVIFIFYAALSPTITFGGLLGEK	TEGMG	VT	ELIVSTATLGVIFSLLAGQPL	LIIGFSGPLL	VFE	EAFYK	Q	QAY	NFE	814												
sk_Ae3	-VEVDSLERTN	RLFGGLIRDVRRYP	QYLSDIRDAFN	VQCLAAIFIFYAALSPAITFGGLLGA	TEGLIGVSELIV	STS	IMGIVFSLLAGQPL	LIIGFTGPLL	VFE	EAFY	NF	SKD	Q	HD	788											
z_Ae3	YLTGRVWIGFWLIFIVLVIVA	AEGSFLVRYISPTQEIFAFLISLIF	IYETFS	KLIKVFQEHPLMSY	TSAAFKHS	DQRGSSVI--GEPILNQ	PNTALLSMVLM	MGTFF	TAFFL	RKLRNS	854															
ti_Ae3	YLTGRVWIGFWLIFIVLVIVA	AEGSFLVRYISPTQEIFAFLISLIF	IYETFS	KLIKVFK	KEHPLMAV	YPT-----DASGSQNL--DGPIYNQ	PNTALLSLVLM	MGTFF	VAF	FLRFRNS	926															
fu_Ae3	YLTGRVWIGFWLIFIVLVIVA	AEGSFLVRYISPTQEIFAFLISLIF	IYETFS	KLKVF	KEHPLMSV	YPS-----DATTANGF	HDDHLVFNQ	PNTALLSLVLM	MGTFF	LAF	FLRKLNS	928														
sk_Ae3	YLTGRVWIGFWL	MFIVLITVALEGSFLVRYVTP	TQEIFAFLISAFI	IYETFK	LLIVFAAHP	LLKSYV	---FPELEGN	VT	KDL	----VVIMQ	PNTALLSLVLM	VGTFF	TAY	FLRKLNS	902											
z_Ae3	RFLGGKVR	RIVGDFGIPISILISVLVDILIP	DTYTQKLVN	PSGFSVTS	PD	KRGW	FISPF	GDKQ	FP	PVMMGAS	VIPALLV	FILIF	METQIT	TTLIV	SKKERR	LMK	SGF	HLD	LL	IV	T	LGA	974			
ti_Ae3	RFLGGKARR	IIGDFGIPISILVSVLVDYAIT	DTYTQKLVN	PSGFSVTS	PD	KRGW	FISPF	GDK	FP	PTWMMGAS	VVPALLV	FILIF	METQIT	SLIV	SKKERR	LVK	SGF	HLD	LL	IV	L	LGA	1046			
fu_Ae3	RFLGGKARR	IIGDFGIPISILVFMDCS	IPDTYTQKLVN	PSGFSVTS	PD	KRGW	FISPF	GDKQ	FP	PTWMMGAS	VVPALLV	FILIF	METQIT	SLIV	SKKERR	LVK	SGF	HLD	LL	IV	L	LGA	1048			
sk_Ae3	RFLAGSVRR	TIGDFGIP	IAILLVLLVDISVP	DTYTEKLVN	PLHFS	VTAPE	KRRWF	IHPL	GK	NG	FI	WMI	F	GA	IA	P	ALL	L	L	L	L	L	L	L	IGVGG	1022

z\_Ae3 ICPLFGLPWLTAATVRSVTHVNALTVMSKATAPGEKPMIQEVKEQRTGMCVAILVGLSIVMTDVLRHIPLAVLFGIFLYMGITSLTGIQLYERITLMVTPAKHHPDHVYVTKVKTWRMN 1094  
 ti\_Ae3 LCPLFGLPWLTAATVRSVTHVNALTVMSKATAPGEKPMIQEVKEQRLTGLLVAVLVGMSIVMTDILRLIPLAVLFGIFLYMGVTSLTGIQLYERITLMVTPAKHHPDHIYVTKVKTWRMN 1166  
 fu\_Ae3 FCPLFGLPWLTAATVRSVTHVNALTVMSKATAPGEKPKIQEVKEQRLTGLLVAVLVGMSIVMTDVLRLIPLAVLFGIFLYMGVTSLTGIQLYERITLMVTPAKHHPDHIYVTKVKTWRMN 1168  
 sk\_Ae3 FCGIFGLPWQAAATVRSIAHVNALTVMSNSTAPGEKFRIQEVKEQRTGIVVAVLVGLSVVMSQVLRMIPMAVLFGIFLYMGVTSLTGIQIYERLLLMFVPSKLPDHVYVTKVRTWKMN 1142

z\_Ae3 MFTVIQLLCIVLLWVVKSTVASLAFPPFILIMTVPLRRLILTRIFEERELAALDADEDSPNFDEDGRDEYNEIHMLV 1170  
 ti\_Ae3 MFTIIQLACIVALWVVKSTAASLAFPPVLIMTVPLRRLILSRIFEERELQALDCDEDSPNFDEDGRDEYNEIHMLV 1228  
 fu\_Ae3 MFTTLQLGCIIITLWVVKSTTASLAFPPFILIMTVPLRRLILSRIFEERELQALDCDEDSPNFDEDGRDEYNEIHMLV 1232  
 sk\_Ae3 MFTCIQLFCITILWIKSTIISLAFPPFLLILTVPTRRYLLPKIFHERELMALDSDEIHPNFDEGDHDEYSEMHPQ 905