

	1	10	20	30	40	50	60	70	80	90
bat	MQSTSNHLWLLSDI	LGQGATANVFRGRHKKTGDLFAIKVFNNISFLREVDVQMRREFEVLKKNLHKNIVKLFAT	EEETTTRHKVLI	MEFCPCG						
human	MQSTSNHLWLLSDI	LGQGATANVFRGRHKKTGDLFAIKVFNNISFLREVDVQMRREFEVLKKNLHKNIVKLFAT	EEETTTRHKVLI	MEFCPCG						
rabbit	MQSTSNHLWLLSDI	LGQGATANVFRGRHKKTGDLFAIKVFNNISFLREVDVQMRREFEVLKKNLHKNIVKLFAT	EEETTTRHKVLI	MEFCPCG						
pig	MQSTSNHLWLLSDI	LGQGATANVFRGRHKKTGDLFAIKVFNNISFLREVDVQMRREFEVLKKNLHKNIVKLFAT	EEETTTRHKVLI	MEFCPCG						
cow	MQSTSNHLWLLSDI	LGQGATANVFRGRHKKTGDLFAIKVFNNISFLREVDVQMRREFEVLKKNLHKNIVKLFAT	EEETTTRHKVLI	MEFCPCG						
horse	MQSTSNHLWLLSDI	LGQGATANVFRGRHKKTGDLFAIKVFNNISFLREVDVQMRREFEVLKKNLHKNIVKLFAT	EEETTTRHKVLI	MEFCPCG						
mouse	MQSTSNHLWLLSDI	LGQGATANVFRGRHKKTGDLFAIKVFNNISFLREVDVQMRREFEVLKKNLHKNIVKLFAT	EEETTTRHKVLI	MEFCPCG						
chicken	MQSTSNHLWLLSDI	LGQGATANVFRGRHKKTGDLFAIKVFNNISFLREVDVQMRREFEVLKKNLHKNIVKLFAT	EEETTTRHKVLI	MEFCPCG						
zebrafish	MQSTSNHLWLLSDI	LGQGATANVFRGRHKKTGDLFAIKVFNNISFLREVDVQMRREFEVLKKNLHKNIVKLFAT	EEETTTRHKVLI	MEFCPCG						

	100	110	120	130	140	150	160	170	180
bat	SLYTVLEEPSNAYGLPSES	FLIVLRDVGGMNHLREN	GIVHRDIKPGNIMRVIGEDGQ	SVYKLTDFGAARELEDDEQFVSLYGTEEYLHPDM					
human	SLYTVLEEPSNAYGLPSES	FLIVLRDVGGMNHLREN	GIVHRDIKPGNIMRVIGEDGQ	SVYKLTDFGAARELEDDEQFVSLYGTEEYLHPDM					
rabbit	SLYTVLEEPSNAYGLPSES	FLIVLRDVGGMNHLREN	GIVHRDIKPGNIMRVIGEDGQ	SVYKLTDFGAARELEDDEQFVSLYGTEEYLHPDM					
pig	SLYTVLEEPSNAYGLPSES	FLIVLRDVGGMNHLREN	GIVHRDIKPGNIMRVIGEDGQ	SVYKLTDFGAARELEDDEQFVSLYGTEEYLHPDM					
cow	SLYTVLEEPSNAYGLPSES	FLIVLRDVGGMNHLREN	GIVHRDIKPGNIMRVIGEDGQ	SVYKLTDFGAARELEDDEQFVSLYGTEEYLHPDM					
horse	SLYTVLEEPSNAYGLPSES	FLIVLRDVGGMNHLREN	GIVHRDIKPGNIMRVIGEDGQ	SVYKLTDFGAARELEDDEQFVSLYGTEEYLHPDM					
mouse	SLYTVLEEPSNAYGLPSES	FLIVLRDVGGMNHLREN	GIVHRDIKPGNIMRVIGEDGQ	SVYKLTDFGAARELEDDEQFVSLYGTEEYLHPDM					
chicken	SLYTVLEEPSNAYGLPSES	FLIVLRDVGGMNHLREN	GIVHRDIKPGNIMRVIGEDGQ	SVYKLTDFGAARELEDDEQFVSLYGTEEYLHPDM					
zebrafish	SLYTVLEEPSNAYGLPSES	FLIVLRDVGGMNHLREN	GIVHRDIKPGNIMRVIGEDGQ	SVYKLTDFGAARELEDDEQFVSLYGTEEYLHPDM					

	190	200	210	220	230	240	250	260	270
bat	YERAVLRKD	HOKKYGATVDLWSI	GVTFYHAATGSLPFRPFEGPRRNKEVMYKI	ITGKPS	CAISGVOKAENGPI	DWSGDMFVSCSLSR	GLOVL		
human	YERAVLRKD	HOKKYGATVDLWSI	GVTFYHAATGSLPFRPFEGPRRNKEVMYKI	ITGKPS	CAISGVOKAENGPI	DWSGDMFVSCSLSR	GLOVL		
rabbit	YERAVLRKD	HOKKYGATVDLWSI	GVTFYHAATGSLPFRPFEGPRRNKEVMYKI	ITGKPS	CAISGVOKAENGPI	DWSGDMFVSCSLSR	GLOVL		
pig	YERAVLRKD	HOKKYGATVDLWSI	GVTFYHAATGSLPFRPFEGPRRNKEVMYKI	ITGKPS	CAISGVOKAENGPI	DWSGDMFVSCSLSR	GLOVL		
cow	YERAVLRKD	HOKKYGATVDLWSI	GVTFYHAATGSLPFRPFEGPRRNKEVMYKI	ITGKPS	CAISGVOKAENGPI	DWSGDMFVSCSLSR	GLOVL		
horse	YERAVLRKD	HOKKYGATVDLWSI	GVTFYHAATGSLPFRPFEGPRRNKEVMYKI	ITGKPS	CAISGVOKAENGPI	DWSGDMFVSCSLSR	GLOVL		
mouse	YERAVLRKD	HOKKYGATVDLWSI	GVTFYHAATGSLPFRPFEGPRRNKEVMYKI	ITGKPS	CAISGVOKAENGPI	DWSGDMFVSCSLSR	GLOVL		
chicken	YERAVLRKD	HOKKYGATVDLWSI	GVTFYHAATGSLPFRPFEGPRRNKEVMYKI	ITGKPS	CAISGVOKAENGPI	DWSGDMFVSCSLSR	GLOVL		
zebrafish	YERAVLRKD	HOKKYGATVDLWSI	GVTFYHAATGSLPFRPFEGPRRNKEVMYKI	ITGKPS	CAISGVOKAENGPI	DWSGDMFVSCSLSR	GLOVL		

	280	290	300	310	320	330	340	350	360
bat	LTPVLANILEADQEK	CWGFDOFFAETSD	ILHRMIIHVFSLQ	QMTAHKIYIHSYNTAT	VFHELVIYKQTKIISSNOELI	YEGRRLLVLEPGRLAQ			
human	LTPVLANILEADQEK	CWGFDOFFAETSD	ILHRMIIHVFSLQ	QMTAHKIYIHSYNTAT	VFHELVIYKQTKIISSNOELI	YEGRRLLVLEPGRLAQ			
rabbit	LTPVLANILEADQEK	CWGFDOFFAETSD	ILHRMIIHVFSLQ	QMTAHKIYIHSYNTAT	VFHELVIYKQTKIISSNOELI	YEGRRLLVLEPGRLAQ			
pig	LTPVLANILEADQEK	CWGFDOFFAETSD	ILHRMIIHVFSLQ	QMTAHKIYIHSYNTAT	VFHELVIYKQTKIISSNOELI	YEGRRLLVLEPGRLAQ			
cow	LTPVLANILEADQEK	CWGFDOFFAETSD	ILHRMIIHVFSLQ	QMTAHKIYIHSYNTAT	VFHELVIYKQTKIISSNOELI	YEGRRLLVLEPGRLAQ			
horse	LTPVLANILEADQEK	CWGFDOFFAETSD	ILHRMIIHVFSLQ	QMTAHKIYIHSYNTAT	VFHELVIYKQTKIISSNOELI	YEGRRLLVLEPGRLAQ			
mouse	LTPVLANILEADQEK	CWGFDOFFAETSD	ILHRMIIHVFSLQ	QMTAHKIYIHSYNTAT	VFHELVIYKQTKIISSNOELI	YEGRRLLVLEPGRLAQ			
chicken	LTPVLANILEADQEK	CWGFDOFFAETSD	ILHRMIIHVFSLQ	QMTAHKIYIHSYNTAT	VFHELVIYKQTKIISSNOELI	YEGRRLLVLEPGRLAQ			
zebrafish	LTPVLANILEADQEK	CWGFDOFFAETSD	ILHRMIIHVFSLQ	QMTAHKIYIHSYNTAT	VFHELVIYKQTKIISSNOELI	YEGRRLLVLEPGRLAQ			

	370	380	390	400	410	420	430	440	450	460
bat	HFPKTEENPI	IFVVSREPLNTIG	IYEKISLPKVHPRYDL	DGASMAKAITGVVCYACRIAST	LLLYOELMRKGIRWLI	ELVKDDYN	ETVHK			
human	HFPKTEENPI	IFVVSREPLNTIG	IYEKISLPKVHPRYDL	DGASMAKAITGVVCYACRIAST	LLLYOELMRKGIRWLI	ELVKDDYN	ETVHK			
rabbit	HFPKTEENPI	IFVVSREPLNTIG	IYEKISLPKVHPRYDL	DGASMAKAITGVVCYACRIAST	LLLYOELMRKGIRWLI	ELVKDDYN	ETVHK			
pig	HFPKTEENPI	IFVVSREPLNTIG	IYEKISLPKVHPRYDL	DGASMAKAITGVVCYACRIAST	LLLYOELMRKGIRWLI	ELVKDDYN	ETVHK			
cow	HFPKTEENPI	IFVVSREPLNTIG	IYEKISLPKVHPRYDL	DGASMAKAITGVVCYACRIAST	LLLYOELMRKGIRWLI	ELVKDDYN	ETVHK			
horse	HFPKTEENPI	IFVVSREPLNTIG	IYEKISLPKVHPRYDL	DGASMAKAITGVVCYACRIAST	LLLYOELMRKGIRWLI	ELVKDDYN	ETVHK			
mouse	HFPKTEENPI	IFVVSREPLNTIG	IYEKISLPKVHPRYDL	DGASMAKAITGVVCYACRIAST	LLLYOELMRKGIRWLI	ELVKDDYN	ETVHK			
chicken	HFPKTEENPI	IFVVSREPLNTIG	IYEKISLPKVHPRYDL	DGASMAKAITGVVCYACRIAST	LLLYOELMRKGIRWLI	ELVKDDYN	ETVHK			
zebrafish	HFPKTEENPI	IFVVSREPLNTIG	IYEKISLPKVHPRYDL	DGASMAKAITGVVCYACRIAST	LLLYOELMRKGIRWLI	ELVKDDYN	ETVHK			

	470	480	490	500	510	520	530	540	550
bat	KTEVVITLDFCIRNI	EKTVMNVYEKL	MKINLEAAEL	DEISDIHTKLLRLSS	SQGTIETS	LQDIE	SKLSPGGGL	ADTWAHOG	GTGTHPKDRHVEKL
human	KTEVVITLDFCIRNI	EKTVMNVYEKL	MKINLEAAEL	DEISDIHTKLLRLSS	SQGTIETS	LQDIE	SKLSPGGGL	ADTWAHOG	GTGTHPKDRHVEKL
rabbit	KTEVVITLDFCIRNI	EKTVMNVYEKL	MKINLEAAEL	DEISDIHTKLLRLSS	SQGTIETS	LQDIE	SKLSPGGGL	ADTWAHOG	GTGTHPKDRHVEKL
pig	KTEVVITLDFCIRNI	EKTVMNVYEKL	MKINLEAAEL	DEISDIHTKLLRLSS	SQGTIETS	LQDIE	SKLSPGGGL	ADTWAHOG	GTGTHPKDRHVEKL
cow	KTEVVITLDFCIRNI	EKTVMNVYEKL	MKINLEAAEL	DEISDIHTKLLRLSS	SQGTIETS	LQDIE	SKLSPGGGL	ADTWAHOG	GTGTHPKDRHVEKL
horse	KTEVVITLDFCIRNI	EKTVMNVYEKL	MKINLEAAEL	DEISDIHTKLLRLSS	SQGTIETS	LQDIE	SKLSPGGGL	ADTWAHOG	GTGTHPKDRHVEKL
mouse	KTEVVITLDFCIRNI	EKTVMNVYEKL	MKINLEAAEL	DEISDIHTKLLRLSS	SQGTIETS	LQDIE	SKLSPGGGL	ADTWAHOG	GTGTHPKDRHVEKL
chicken	KTEVVITLDFCIRNI	EKTVMNVYEKL	MKINLEAAEL	DEISDIHTKLLRLSS	SQGTIETS	LQDIE	SKLSPGGGL	ADTWAHOG	GTGTHPKDRHVEKL
zebrafish	KTEVVITLDFCIRNI	EKTVMNVYEKL	MKINLEAAEL	DEISDIHTKLLRLSS	SQGTIETS	LQDIE	SKLSPGGGL	ADTWAHOG	GTGTHPKDRHVEKL

	560	570	580	590	600	610	620	630	640
bat	QVLLNCITEI	YYQFKKDKAERR	LAYNEEQIHKFDKQKLY	HATKAMTHE	TDECVKYEAFLDK	SEEWMRKMHLR	KQLLSLT	NOCFDIEEEV	
human	QVLLNCITEI	YYQFKKDKAERR	LAYNEEQIHKFDKQKLY	HATKAMTHE	TDECVKYEAFLDK	SEEWMRKMHLR	KQLLSLT	NOCFDIEEEV	
rabbit	QVLLNCITEI	YYQFKKDKAERR	LAYNEEQIHKFDKQKLY	HATKAMTHE	TDECVKYEAFLDK	SEEWMRKMHLR	KQLLSLT	NOCFDIEEEV	
pig	QVLLNCITEI	YYQFKKDKAERR	LAYNEEQIHKFDKQKLY	HATKAMTHE	TDECVKYEAFLDK	SEEWMRKMHLR	KQLLSLT	NOCFDIEEEV	
cow	QVLLNCITEI	YYQFKKDKAERR	LAYNEEQIHKFDKQKLY	HATKAMTHE	TDECVKYEAFLDK	SEEWMRKMHLR	KQLLSLT	NOCFDIEEEV	
horse	QVLLNCITEI	YYQFKKDKAERR	LAYNEEQIHKFDKQKLY	HATKAMTHE	TDECVKYEAFLDK	SEEWMRKMHLR	KQLLSLT	NOCFDIEEEV	
mouse	QVLLNCITEI	YYQFKKDKAERR	LAYNEEQIHKFDKQKLY	HATKAMTHE	TDECVKYEAFLDK	SEEWMRKMHLR	KQLLSLT	NOCFDIEEEV	
chicken	QVLLNCITEI	YYQFKKDKAERR	LAYNEEQIHKFDKQKLY	HATKAMTHE	TDECVKYEAFLDK	SEEWMRKMHLR	KQLLSLT	NOCFDIEEEV	
zebrafish	QVLLNCITEI	YYQFKKDKAERR	LAYNEEQIHKFDKQKLY	HATKAMTHE	TDECVKYEAFLDK	SEEWMRKMHLR	KQLLSLT	NOCFDIEEEV	

	650	660	670	680	690	700	710	720
bat	SKYQDYTNEL	QETLPQKMF	FAASSGIKHT	MAPTYPS	CSNTLVEMTLG	MKKLKEEMEGVVKEL	AEANNHIL	ERFGSLTMDGGRLNVDCI
human	SKYQDYTNEL	QETLPQKMF	FAASSGIKHT	MAPTYPS	CSNTLVEMTLG	MKKLKEEMEGVVKEL	AEANNHIL	ERFGSLTMDGGRLNVDCI
rabbit	SKYQDYTNEL	QETLPQKMF	FAASSGIKHT	MAPTYPS	CSNTLVEMTLG	MKKLKEEMEGVVKEL	AEANNHIL	ERFGSLTMDGGRLNVDCI
pig	SKYQDYTNEL	QETLPQKMF	FAASSGIKHT	MAPTYPS	CSNTLVEMTLG	MKKLKEEMEGVVKEL	AEANNHIL	ERFGSLTMDGGRLNVDCI
cow	SKYQDYTNEL	QETLPQKMF	FAASSGIKHT	MAPTYPS	CSNTLVEMTLG	MKKLKEEMEGVVKEL	AEANNHIL	ERFGSLTMDGGRLNVDCI
horse	SKYQDYTNEL	QETLPQKMF	FAASSGIKHT	MAPTYPS	CSNTLVEMTLG	MKKLKEEMEGVVKEL	AEANNHIL	ERFGSLTMDGGRLNVDCI
mouse	SKYQDYTNEL	QETLPQKMF	FAASSGIKHT	MAPTYPS	CSNTLVEMTLG	MKKLKEEMEGVVKEL	AEANNHIL	ERFGSLTMDGGRLNVDCI
chicken	SKYQDYTNEL	QETLPQKMF	FAASSGIKHT	MAPTYPS	CSNTLVEMTLG	MKKLKEEMEGVVKEL	AEANNHIL	ERFGSLTMDGGRLNVDCI
zebrafish	SKYQDYTNEL	QETLPQKMF	FAASSGIKHT	MAPTYPS	CSNTLVEMTLG	MKKLKEEMEGVVKEL	AEANNHIL	ERFGSLTMDGGRLNVDCI