

CLUSTAL O(1.1.0) multiple sequence alignment

Human MGSAVMDTKKKKDVSSPGGSGGKKNASQKRRSLRVHIPDLSSFAMPLLDGDLEGGSGKHSS
Chimpanzee -----
Rat -----
Mouse -----
Cattle MGSAAAMDTEKKKDVCSPPGRSGGCMNSIQKRRSLRVHIPDLSSFAMPLLDGDLESSEKPPS
Chicken -----
Dog MGSAAAMDTKKKKDVSSPGGSGGKKNPSQKRRSLRVHIPDLSSFAMPLLDGDLESSEKHHSS
Western_Clawed_Frog -----
Cat MGSSAMDTKKKKDVASPGESSGKKNPSQKRRSLRVHIPDLSSFAMPLLDGDLESSEKHAS
Zebrafish -----
C._elegans -----

Human RKVDSPPFGPGSPSKGFFSRGPQPRPSSPMSAPVRPKTSPGSPKTVFFFSYQESPPRSPRR
Chimpanzee -----
Rat -----
Mouse -----
Cattle RKVDSPPFGSGSPSKGFFTRGPQPRPSSPVSAPVRPKTSPGSPKTVFFFSYQESPPRSPRR
Chicken -----
Dog RKVDSPCSSGSPSKGFFSRGPQHRPSSPVSAPVRPKTSPGSPKTVFFFSYQESPPRSPRR
Western_Clawed_Frog -----
Cat RKVDSPCSSGSPSKGFFSRGPQHRPSSPVSAPVRPKASPGSPKTVFFFSYQESPPRSPRR
Zebrafish -----
C._elegans -----

Human MSFSGIFRSSSKESSPNSNPATSPGGIRFFSRSRKTSGLSSSPSTPTQVTKQHTFFPLESY
Chimpanzee MKRFGSLRSNKKHKDQNRSTE----RRQSEPHGLFASGLSSSPSTPTQVTKQHTFFPLESY
Rat -----
Mouse -----
Cattle MSFSGIFRSSSKDSSPSSNPSTSPGGIRFFSRSRKTSGLSSSPSTPTQVAKQHTFFPLESY
Chicken -----
Dog MSFSGIFRSSSKESSPNSNPSTSPGGIRFFSRSRKTSGLSSSPSTPTQVAKQHTFFPLESY
Western_Clawed_Frog -----
Cat MSFSGIFRSSSKESSPNSNPSTSPGGIRFFSRSRKTSGLSSSPSTPTQAAKQHPFFPLESY
Zebrafish -----
C._elegans -----

Human KHEPERLENRIYASSSPPDTGQRFCPSSFQSPTRPPLASPTHYAPSKAA-AL-----
Chimpanzee KHEPERLENRIYASSSPPDTGQRFCPSSFQSPTRPPLASPTHYAPSKAA-AL-----
Rat -----
Mouse -----
Cattle KQEPERLENRIYASSSPPDTGQRFSPSSFQSAARPPSASPTHYAPSKSVSLGLLGARPPG
Chicken -----
Dog KHEPERLENRIYASSSPPDTGQRYCPSSFQSAARPPSASPTHYASPRTVS-L-----
Western_Clawed_Frog -----
Cat KHEPERLENRIYASTSPPDTGQRYCPSSFQSTAGPPSASPTHYASPRTVSPW-----
Zebrafish -----
C._elegans -----

Human -----
Chimpanzee -----
Rat -----
Mouse -----
Cattle EALGCQASQPANLSWRSESLRYDPGLHPPLPGTSPRPPHPYLAPHPSGPTPGRRPHPR
Chicken -----
Dog -----
Western_Clawed_Frog -----

Cat	-----		
Zebrafish	-----		
C._elegans	-----		
Human	-----		AAALGPAE
Chimpanzee	-----		AAALGPAE
Rat	-----		
Mouse	-----		
Cattle	RLNLRGRASVGGGGKPRPCAPPLYRFPAQPLTPPLQSRTRPVVRPAPAAVPRPCGPSVRAS		
Chicken	-----		
Dog	-----		AFSCGPGL
Western_Clawed_Frog	-----		
Cat	-----		AGPPGPLL
Zebrafish	-----		
C._elegans	---MVAKKNILGG---PPSNQLNDNSSLPPIGELVISVDDE---		
Human	-----		
Chimpanzee	-----		
Rat	-----		
Mouse	-----		
Cattle	RPGPAPAAPPPARYGPSARPLPRPRPCGSGPAPAAPPPARGPAAPRGPAAPQSPRTPALR		
Chicken	-----		
Dog	-----		
Western_Clawed_Frog	-----		
Cat	-----		
Zebrafish	-----		
C._elegans	-----		PTTAPPVTKPVKK-GW
Human	-----		
Chimpanzee	-----		
Rat	-----		
Mouse	-----		
Cattle	PRAPPPARPGTSAARMLIRVGPGRSDSRVSSPEAAVPRRPPPVQPRRGPVRE--TRGR		
Chicken	-----		
Dog	-----		
Western_Clawed_Frog	-----		
Cat	-----		
Zebrafish	-----		
C._elegans	-----		IKTAKSKASGTLRRTLFRSTKRRAKDAEAIHE-----AGEEEEDEEDYTO
Human	-----	AGMLE	K
Chimpanzee	-----	AGMLE	K
Rat	-----		
Mouse	-----	MLE	K
Cattle	RSASAVAAVPLGGVIE		LAPRGARSPALGTDGRSFCPYELISA
Chicken	-----		
Dog	-----	QAILN	X
Western_Clawed_Frog	-----		
Cat	-----	AGLIE	M
Zebrafish	-----		
C._elegans	DNYD	TVKSLPASGHYKSRVGN	TSHTKLQDLADEMRLRGGGPPKQGSEPP
Human	-----	L	E
Chimpanzee	-----	L	E
Rat	-----		
Mouse	-----	L	E
Cattle	ESKSSNAIPLAGLAFQPNFVYRK--RPAASVTTVYILPHTT--TITAKPRSHPLSVPPK		
Chicken	-----		MLEKLE

Dog ----- I ----- E
Western_Clawed_Frog ----- MLEKLE
Cat ----- V ----- D
Zebrafish ----- MLEKLD
C._elegans ----- IPKPPV I IFRVPRKHANSMSSLRVSPGAIGPSGVVKAPLSDPNFDF-Y

Human FEDEAVEDSESGVYMRFMRSKCYDIVPTSSKLVVFDTTLQVKKAFFALVANGVRAAPLW
Chimpanzee FEDE-VEDSESGVYMRFMRSKCYDIVPTSSKLVVFDTTLQVKKAFFALVANGVRAAPLW
Rat ----- MRFMRSHKCYDIVPTSSKLVVFDTTLQVKKAFFALVANGVRAAPLW
Mouse FQEE-AEDSESGVYMRFMRSKCYDIVPTSSKLVVFDTTLQVKKAFFALVANGVRAAPLW
Cattle ALLCAPEDSESGVYMRFMRSKCYDIVPTSSKLVVFDTTLQVKKAFFALVANGVRAAPLW
Chicken LEDEALEESES DIYVRFMRSHKCYDIVPTSSKLVVFDTTLQVKKAFFALVANGVRAAPLW
Dog YWDXATEDSESGVYMRFMRSKCYDIVPTSSKLVVFDTTLQVKKAFFALVANGVRAAPLW
Western_Clawed_Frog LEDEAVEESES DIYTRFMKSHKCYDIVPTSSKLVVFDTTLQVKKAFFALVANGVRAAPLW
Cat FSE--TEDSESGVYMRFMRSKCYDIVPTSSKLVVFDTTLQVKKAFFALVANGVRAAPLW
Zebrafish IEDEAVEHSES DIYMRFMKSHKCYDIVPTSSKLVVFDTTLQVKKAFFALVANGVRAAPLW
C._elegans TWHTSEADNHDAVYSLFMKAHKCYDLIPTSSKLVVFDTHLPVRKAFYALVYNGVRAAPLW
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Human ESKKQSFVGM L TITDFINILHRYKSP--MVQIYELEEHKIETWRELY-LQETFKPLVNI
Chimpanzee ESKKQSFVGM L TITDFINILHRYKSP--MVQIYELEEHKIETWRELY-LQETFKPLVNI
Rat ESKKQSFVGM L TITDFINILHRYKSP--MVQIYELEEHKIETWRELY-LQETFKPLVNI
Mouse ESKKQSFVGM L TITDFINILHRYKSP--MVQIYELEEHKIETWRELY-LQETFKPLVNI
Cattle ESKKQSFVGM L TITDFINILHRYKSP--MVQIYELEEHKIETWRELY-LQETFKPLVNI
Chicken ESKKQSFVGM L TITDFINILHRYKSP--MVQIYELEEHKIETWRELY-LQETFKPLVNI
Dog ESKKQSFVGM L TITDFINILHRYKSP--MVQIYELEEHKIETWRELY-LQETFKPLVNI
Western_Clawed_Frog ETKNQSFVGM L TITDFINILHRYKSP--MVQIYELEEHKIETWRELY-LQETFKPLVNI
Cat ESKKQSFVGM L TITDFINILHRYKSP--MVQIYELEEHKIETWRELY-LQETFKPLVNI
Zebrafish ETKKQSFVGM L TITDFINILHRYKSP--MVQIYELEEHKIETWRELY-LQETFKPLVNI
C._elegans DTDNQRFTGMLTITDFIKILCKHYDKGDNSEIRALEDDQQLSHWRDQFELDGTLRPFVYI
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Human SPDASLFDVAVSLIKNKIHRPVIDPISGNALYILTHKRILKFLQLFMSDMPKPAFMKQN
Chimpanzee SPDASLFDVAVSLIKNKIHRPVIDPISGNALYILTHKRILKFLQLFMSDMPKPAFMKQN
Rat SPDASLFDVAVSLIKNKIHRPVIDPISGNALYILTHKRILKFLQLFMSDMPKPAFMKQN
Mouse SPDASLFDVAVSLIKNKIHRPVIDPISGNALYILTHKRILKFLQLFMSDMPKPAFMKQN
Cattle SPDASLFDVAVSLIKNKIHRPVIDPISGNALYILTHKRILKFLQLFMSDMPKPAFMKQN
Chicken SPDASLFDVAVSLIKNKIHRPVIDPVSGNALYILTHKRILKFLQLFMSDMPKPAFMKKN
Dog SPDASLFDVAVSLIKNKIHRPVIDPISGNALYILTHKRILKFLQLFMSDMPKPAFMKQN
Western_Clawed_Frog FPDASLFDVAVSLIKNKIHRPVIDPVSGNALYILTHKRILKFLQLFVSEMPKPAFMKQN
Cat SPDASLFDVAVSLIKNKIHRPVIDPISGNALYILTHKRILKFLQLFMSDMPKPAFMKQN
Zebrafish SPDASIFDVAVSLIKNKIHRPVIDPVSGNALYILTHKRILKFLQLFVCEMPKPAFMKQT
C._elegans DPNESLHRAVELLCESEKVVHRLPVLDRKGTGNITYILTHKRIMKFLSLYMRDLPRPSFMSC T
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Human LDELGIGTYHNIAFIHPDTPIIKALNIFVERRISALPVVDESGKVVDIYSKFDVINLAAE
Chimpanzee LDELGIGTYHNIAFIHPDTPIIKALNIFVERRISALPVVDESGKVVDIYSKFDVINLAAE
Rat LDELGIGTYHNIAFIHPNTPIIKALNIFVERRISALPVVDESGKVVDIYSKFDVINLAAE
Mouse LDELGIGTYHNIAFIHPDTPIIKALNIFVERRISALPVVDESGKVVDIYSKFDVINLAAE
Cattle LDALGIGTYHNIAFIHPDTPIIKALNVFVERRVSALPVVDESGKVVDIYSKFDVINLAAE
Chicken LDELGIGTYHNIAFIHPDTPIIKALNIFVERRISALPVVDESGKVVDIYSKFDVINLAAE
Dog LDALGIGTYHNIAFIHPDTPIIKALNVFVERRVSALPVVDESGKVVDIYSKFDVINLAAE
Western_Clawed_Frog LEELGIGTYHNIAFIHPHTPIIKALNIFVERRVSALPVVDESGKVVDIYSKFDVINLAAE
Cat LDALGIGTYHNIAFIHPDTPIIKALNVFVERRVSALPVVDESGKVVDIYSKFDVINLAAE
Zebrafish LEELSIGTYHNIAFIHPDTPIIKALSVFVDRRVSALPVVDESGKVVDIYSKFDVINLAAE
C._elegans PRELGIGAWGDILCCHVDTPIHDALELFLKNRVSALPLIDENGRVVDIYAKFDVIVSLAAE
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Human KTYNNLDITVTQALQHSQYFEGVVKCNKLEILETIVDRIVRAEVHRLVVVNEADSI VGI
Chimpanzee KTYNNLDITVTQALQHSQYFEGVVKCNKLEILETIVDRIVRAEVHRLVVVNEADSI VGI
Rat KTYNNLDITVTQALQHSQYFEGVVKCNKLEILETIVDRIVRAEVHRLVVVNEADSI VGI
Mouse KTYNNLDITVTQALQHSQYFEGVVKCNKLEILETIVDRIVRAEVHRLVVVNEADSI VGI

Cattle KTYNNLDITVTQALQHR SQYFEGVVKCSKLEILETIVDRIVRAEVHRLV VVNEADSIVGI
 Chicken KTYNNLDITVTQALQHR SQYFEGVVKCSMLETLETIVDRIVKAEVHRLV VVNEADSIVGI
 Dog KTYNNLDITVTQALQHR SQYFEGVVKCSKLEILETIVDRIVRAEVHRLV VVNEADSIVGI
 Western_Clawed_Frog KTYNNLDITVTQALQHR SQYFEGVVKCSKLEILETIVDRIVKAEVHRLV VVNEADSIVGI
 Cat KTYNNLDITVTQALQHR SQYFEGVVKCSKLEILETIVDRIVRAEVHRLV VVNEADSIVGI
 Zebrafish KTYNNLDISVTQALMHR SQYFEGVMKCNRLLETLETIVDRIVKAEVHRLV VVDENGSIVGI
 C._elegans SSYDKLDCTVQALQHR SEWFEGVQTCLETDSL FQVLEAIVKAEVHRLV IVTDQDKKVVGV
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Human ISLSDILQALILTPAGAKQKETETE-----
 Chimpanzee ISLSDILQALILTPAGAKQKETETE-----
 Rat ISLSDILQALILTPAGAKQKETETE-----
 Mouse ISLSDILQALILTPAGAKQKETETE-----
 Cattle ISLSDILQALILTPAGAKQKQTEAE-----
 Chicken ISLSDILQALVLTTPAGAKQKENESE-----
 Dog ISLSDILQALILTPAGAKQKEAETE-----
 Western_Clawed_Frog ISLSDILQALVLTSPAGAKRKESEAE-----
 Cat ISLSDILQALILTPAGAKQKETETE-----
 Zebrafish VSLSDILQALVLTNPAGMLGKDSEAEAE-----
 C._elegans VSLSDILKNLVLTDP CQKPPPPPPQSQQAGGGGPPTRNASGTSTGGASSSDSPPHSIPEGI
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Human -----
 Chimpanzee -----
 Rat -----
 Mouse -----
 Cattle -----
 Chicken -----
 Dog -----
 Western_Clawed_Frog -----
 Cat -----
 Zebrafish -----
 C._elegans EVEDDDDDDEEAPPPSIDCSTPGPSSAAT