1. Gen SHANK3.

Jest to gen, który może być odpowiedzialny za autyzm.

2.

Gatunki, u których występuje ten gen:

- Homo sapiens Człowiek rozumny
- Pan troglodytes Szympans zwyczajny
- Canis lupus familiaris pies domowy
- Bos taurus Bydło
- Mus musculus Mysz domowa
- Rattus norvegicus Szczur wędrowny
- Xenopus (Silurana) tropicalis gatunek płaza bezogonowego z rodziny grzbietorodowatych

Kenopus	MRERNQSPNGCERDLREMQSLRSSPSPAHVVSPVPELPERPGPPPPSPPQGPPRDPGAPG	60
n		0
s		0
		0
		0
		0
S		0
us	TPCLSGGDPETPESESQSPSRGRDTPTRLRSPNFRYPPDSGREPQGTEKLAQAGDISAQI	120
		0
;		0
		0
		0
		0
IS		0
us	KERELSSPDRNHHIEDRSIPIRDRYPTFGGKDTPARDRGSPVSDRVSVRSASDLRIRDRE	180
		0
	MAPGASGLGRRASRPQRVPPGARPRRGPTRGPRPRR	36
		0
		0
		0
IS		0
us	LTVRDRDPHGSDRDPPGRRMEETAGNAVIIRIGIPDLQQTKCLRLNPDAPVWVAKQ	236
	MDGPGASAVVVRVGIPDLQQTKCLRLDPAAPVWAAKQ	37
5	YASPRLASAGSRLRERRPPGGRTRIPRQPPPGLPAGFRGPLTPTAPGGRGPDRTPG	92
	HDRAPLQKCLRLDPAAPVWAAKQ	23
	MDGPGASAVVVRVGIPDLQQTKCLRLDPAAPVWAAKQ	37
	MDGPGASAVVVRVGIPDLQQTKCLRLDPTAPVWAAKQ	37
S	** * *** . :	37
us	RILCTLNHSLKDVLNYGLFQPAFNGRAGKFLDEERLL	273
	RVLCALNHSLQDALNYGLFQPPSRGRAGKFLDEERLL	74
	LGLEVGGRSHMTLTPGA-RAAGRGQYRAEQGRDGTADGGGPAGASASVETSSAPSPKPVL	151
	RVLCALNHSLQDALNYGLFQPPSRGRAGKFLDEERLL	60
	RVLCALNHSLQDALNYGLFQPPSRGRAGKFLDEERLLRVLCALNHSLODALNYGLFOPPSRGRAGKFLDEERLL	74 74
s	RVLCALNHSLODALNYGLFOPPSRGRAGKFLDEERLL	74
3	* :* * :: * ** . * :*	74
IS	REYPPSLATPVPYLEFRYKRRVYTQSLLDDKQFAKLHTKGNLKKFMEYIQLQNIEKVTRL	333
	QEYPPNLDTPLPYLEFRYKRRVYAQNLIDDKQFAKLHTKANLKKFMDYVQLHSTDKVARL	134
	LGRAP-ILSSLRWVTLRRSEP-WCSADPDGWVFQANLKKFMDYVQLHSTDKVARL	204
	QEYPPNLDTPLPYLEFRYKRRVYAQNLIDDKQFAKLHTKANLKKFMEYVQLHSTEKVARL	120
	QEYPPNLDTPLPYLEFRYKRRVYAQNLIDDKQFAKLHTKANLKKFMDYVQLHSTDKVARL	134
	QDYPPNLDTPLPYLEFRYKRRVYAQNLIDDKQFAKLHTKANLKKFMDYVQLHSTDKVARL	134
S	QDYPPNLDTPLPYLEFRYKRRVYAQNLIDDKQFAKLHTKANLKKFMDYVQLHSTDKVARL *::::::*:::::::::::::::::::::::::::::	134
us	LERGLDPNYQDPDTGECPLTLASQLEGGADLVKILRNGGAHLDFRTREGLTALHKAVHYR	393
	LDKGLDPNFHDPDSGECPLSLAAQLDNATDLLKVLKNGLRDLDFRSRDGVSLKRGATRQR	194
	LDKGLDPNFHDPDSGECPLSLAAQLDNATDLLKVLKNGGAHLDFRTRDGLTAVHCATRRR	264
	LDKGLDPNFHDPDSGECPLSLAAQLDDATDLLKVLKNGGAHLDFRTRDGLTAVHCATRQR	180
	LDKGLDPNFHDPDSGECPLSLAAQLDNATDLLKVLKNGGAHLDFRTRDGLTAVHCATRQR	194
	LDKGLDPNFHDPDSGECPLSLAAQLDNATDLLKVLRNGGAHLDFRTRDGLTAVHCATRQR	194
S	LDKGLDPNFHDPDSGECPLSLAAQLDNATDLLKVLRNGGAHLDFRTRDGLTAVHCATRQR *::*****:***************************	194
us	NHAVLMTLLDLGASPDYKDSRGLTPLYHSAMVGGDPYCCELLLRDYASLGCEDENGNQEI	453
	NAAA	198
	NAAALTTLLDLGASPDYKDSRGLTPLYHSALGGGDALCCELLLHDHAQLGTTDENGWQEI	324
	NAAALTTLLDLGASPDYKDSRGLTPLYHSALGGGDALCCELLLHDHAQLGTTDENGWQEV	248
	NAAALTTLLDLGASPDYKDSRGLTPLYHSALGGGDALCCELLLHDHAQLGITDENGWQEI	254
	NAGALTTLLDLGASPDYKDSRGLTPLYHSALGGGDALCCELLLHDHAQLGTTDENGWQEI	254
,	NAGALTTLLDLGASPDYKDSRGLTPLYHSALGGGDALCCELLLHDHAQLGTTDENGNQEI *	254
ous	HOACRYGHVOHLEHLLFYGADMRAQNASGNSALHLCALYNQESCARVLLFRGASKEIRNF	513
	Tighetti diriyineeti ee Tahomingin adaan ee Ee Tigeachiyee Tidhan ee Tiili	198
S	HQACRFGHVQHLEHLLFYGADMGAQNASGNTALHICALYNQESCARVLLFRGANKDVRNY	384
	HQACRFGHVQHLEHLLFYGADMGAQNASGNTALHICALYNQESCARVLLFRGANKDVRNY	300
	HQACRFGHVQHLEHLLFYGADMGAQNASGNTALHICALYNQESCARVLLFRGANRDVRNY	314
	HQACRFGHVQHLEHLLFYGANMGAQNASGNTALHICALYNQESCARVLLFRGANKDVRNY	314
5	HOACRFGHVOHLEHLLFYGANMGAONASGNTALHICALYNOESCARVLLFRGANKDVRNY	314

Xenopus		
	NNQTAFQVAIIAGNFELAEIIKTHKESDIVPFRETPSYTKRRRVVSSVGLSSPRFLQRSA	573
Pan	LTVIPFRETPSYAKRRRLAGPSGLASPRPLQRSA	232
Canis	-	444
	NSQTAFQVAIIAGNFELAEVIKTHKDSDVVPFRETPSYAKRRRLAGPSGLASPRPLQRSA	
Bos	NSQTAFQVAIIAGNFELAEVIKTHKDSDVVPFRETPSYAKRRRLAGPSALASPRPLQRSA	360
Homo	NSQTAFQVAIIAGNFELAEVIKTHKDSDVVPFRETPSYAKRRRLAGPSGLASPRPLQRSA	374
Mus	NSQTAFQVAIIAGNFELAEVIKTHKDSDVVPFRETPSYAKRRRLAGPSGLASPRPLQRSA	374
Rattus	NSQTAFQVAIIAGNFELAEVIKTHKDSDVVPFRETPSYAKRRRLAGPSGLASPRPLQRSA	374
Naccus	***** ****	5/4
	11	
Xenopus	SDNNLNSDG-AHYSPVPSLRGLPPQLLSQGPEVSGIAA-VGDSSLASTTSSRSTHSRS	629
Pan	SDINLKGEAQPAASPGPSLRSLPHQLLLQRLQEEKDRDRDADQESNISGPLAGRASQSKI	292
Canis	SDINLKGEVOPAASPGPSLRSLPHOLLLORLOEEKDRDRDGDOENDIGGPTAGRGSOSKI	504
Bos	SDINLKGEVQPAASPGPSLRSLPHQLLLQRLQEEKDRDRDGDQQN-DSGPATGRGSQSKI	419
Homo	SDINLKGEAQPAASPGPSLRSLPHQLLLQRLQEEKDRDRDADQESNISGPLAGRAGQSKI	434
Mus	SDINLKGD-QPAASPGPTLRSLPHQLLLQRLQEEKDRDRDGELENDISGPSAGRGGHNKI	433
Rattus	SDINLKGD-QPAASPGPTLRSLPHQLLLQRLQEEKDRDRDGEQENDISGPSAGRGGHSKI	433
	** **::: ** *:**: ** * :	
Xenopus	PSLHRAREERDIDTHTLRRGRGKSSPGPLDVRSTGPRGPKRKLYSAVPGRTFIA	683
Pan	RXEGAGRPWRGWEGGVPGPEAHPQPPPRGPKRKLYSAVPGRKFIA	337
Canis	RCGGGWGGLLEVM	517
Bos	RSEAPSDFLSWPASPPGVPALLRRTDPSPAFPSAHRSPPRPGGLSRRKLYSAVPGRKFIA	479
Homo	SPSGPGGPGPAPGPGPAPPAPPAPPPRGPKRKLYSAVPGRKFIA	478
Mus	SPSGPGGSGPAPGPAPPPRGPKRKLYSAVPGRKFIA	477
Rattus	SPSGPGGSGPAPGPGPASPAPPAPPPRGPKRKLYSAVPGRKFIA	477
Vancous	WESTEROOD CONTROL NO CERTAIN OF CHECK WEST CHECK OF CHECK	744
Xenopus	VKSYEPQGPGEIQLNRGERVKVLSIGEGGFWEGSVKGRSGWFPADCVEEVQMRQPDPR	741
Pan	VKAHSPQGEGEIPLHRGEAVKVLSIGEGGFWEGTVKGRTGWFPKDCVEEVQMRQQPPRVX	397
Canis	LCPDGSLASVPPVLSIGEGGFWEGTVKDRTGWFPADCVEEVQMRQYDTR	566
Bos	VKAHSPOGEGEIPLHRGEAVKVLSIGEGGFWEGTVKGRTGWFPADCVEEVOMROYDAR	537
Homo	VKAHSPOGEGEIPLHRGEAVKVLSIGEGGFWEGTVKGRTGWFPADCVEEVOMROHDTR	536
Mus	VKAHSPQGEGEIPLHRGEAVKVLSIGEGGFWEGTVKGRTGWFPADCVEEVQMRQYDTR	535
Rattus	VKAHSPQGEGEIPLHRGEAVKVLSIGEGGFWEGTVKGRTGWFPADCVEEVQMRQYDTR	535
	* * * ********** * * * * * * * * * * * *	
Vananus		744
Xenopus		741
Pan	XXXALLATLRRASALGSRGRVLPEARVQPRNRNLLPTGPDLLPPPPKKIHFLDWSGDRKG	457
Canis		566
Bos		537
Homo		536
Mus		535
Rattus		535
Xenonus		741
Xenopus	LIVILESCANCI COL ACCADDOLEEL VIGAEDSHI EVALLEDSANDAVEACOLEATTIVOLD	741
Pan	LKVLESGAAGLGRLAGGARRQLEELVGAERSWLEVWLEPSAWVRAVEAGQLEATTVHQLP	517
Pan Canis		517 566
Pan	LKVLESGAAGLGRLAGGARRQLEELVGAERSWLEVWLEPSAWVRAVEAGQLEATTVHQLP	517
Pan Canis		517 566
Pan Canis Bos Homo		517 566 537 536
Pan Canis Bos Homo Mus		517 566 537 536 535
Pan Canis Bos Homo		517 566 537 536
Pan Canis Bos Homo Mus		517 566 537 536 535
Pan Canis Bos Homo Mus		517 566 537 536 535
Pan Canis Bos Homo Mus		517 566 537 536 535
Pan Canis Bos Homo Mus Rattus		517 566 537 536 535 535
Pan Canis Bos Homo Mus Rattus Xenopus Pan	QETREDRTKRLFRHYTVGSYDSFTSHSDYVIQEKVARLQKRELEGFGFVLRGAKAET ILPSETREDRTKRLFRHYTVGSYDSLTSHSDYVIDDKVAVLQKRDHEGFGFVLRGAKAET	517 566 537 536 535 535 798
Pan Canis Bos Homo Mus Rattus Xenopus Pan Canis	QETREDRTKRLFRHYTVGSYDSFTSHSDYVIQEKVARLQKRELEGFGFVLRGAKAET ILPSETREDRTKRLFRHYTVGSYDSLTSHSDYVIDDKVAVLQKRDHEGFGFVLRGAKAETHETREDRTKRLFRHYTVGSYDSLTSHSDYVIDDKVAVLQKRDHEGFGFVLRGAKAET	517 566 537 536 535 535 798 577 623
Pan Canis Bos Homo Mus Rattus Xenopus Pan Canis Bos	QETREDRTKRLFRHYTVGSYDSFTSHSDYVIQEKVARLQKRELEGFGFVLRGAKAET ILPSETREDRTKRLFRHYTVGSYDSLTSHSDYVIDDKVAVLQKRDHEGFGFVLRGAKAETHETREDRTKRLFRHYTVGSYDSLTSHSDYVIDDKVAVLQKRDHEGFGFVLRGAKAETHETREDRTKRLFRHYTVGSYDSLSAHSDYVIDDKVAVLQKRDHEGFGFVLRGAKAET	517 566 537 536 535 535 798 577 623 594
Pan Canis Bos Homo Mus Rattus Xenopus Pan Canis	QETREDRTKRLFRHYTVGSYDSFTSHSDYVIQEKVARLQKRELEGFGFVLRGAKAET ILPSETREDRTKRLFRHYTVGSYDSLTSHSDYVIDDKVAVLQKRDHEGFGFVLRGAKAETHETREDRTKRLFRHYTVGSYDSLTSHSDYVIDDKVAVLQKRDHEGFGFVLRGAKAETHETREDRTKRLFRHYTVGSYDSLSAHSDYVIDDKVAVLQKRDHEGFGFVLRGAKAETPETREDRTKRLFRHYTVGSYDSLTSHSDYVIDDKVAVLQKRDHEGFGFVLRGAKAET	517 566 537 536 535 535 798 577 623
Pan Canis Bos Homo Mus Rattus Xenopus Pan Canis Bos	QETREDRTKRLFRHYTVGSYDSFTSHSDYVIQEKVARLQKRELEGFGFVLRGAKAET ILPSETREDRTKRLFRHYTVGSYDSLTSHSDYVIDDKVAVLQKRDHEGFGFVLRGAKAETHETREDRTKRLFRHYTVGSYDSLTSHSDYVIDDKVAVLQKRDHEGFGFVLRGAKAETHETREDRTKRLFRHYTVGSYDSLSAHSDYVIDDKVAVLQKRDHEGFGFVLRGAKAET	517 566 537 536 535 535 798 577 623 594
Pan Canis Bos Homo Mus Rattus Xenopus Pan Canis Bos Homo	QETREDRTKRLFRHYTVGSYDSFTSHSDYVIQEKVARLQKRELEGFGFVLRGAKAET ILPSETREDRTKRLFRHYTVGSYDSLTSHSDYVIDDKVAVLQKRDHEGFGFVLRGAKAETHETREDRTKRLFRHYTVGSYDSLTSHSDYVIDDKVAVLQKRDHEGFGFVLRGAKAETHETREDRTKRLFRHYTVGSYDSLSAHSDYVIDDKVAVLQKRDHEGFGFVLRGAKAETPETREDRTKRLFRHYTVGSYDSLTSHSDYVIDDKVAVLQKRDHEGFGFVLRGAKAETHETREDRTKRLFRHYTVGSYDSLTSHSDYVIDDKVAVLQKRDHEGFGFVLRGAKAET	517 566 537 536 535 535 798 577 623 594 593
Pan Canis Bos Homo Mus Rattus Xenopus Pan Canis Bos Homo Mus	QETREDRTKRLFRHYTVGSYDSFTSHSDYVIQEKVARLQKRELEGFGFVLRGAKAET ILPSETREDRTKRLFRHYTVGSYDSLTSHSDYVIDDKVAVLQKRDHEGFGFVLRGAKAETHETREDRTKRLFRHYTVGSYDSLTSHSDYVIDDKVAVLQKRDHEGFGFVLRGAKAETPETREDRTKRLFRHYTVGSYDSLSAHSDYVIDDKVAVLQKRDHEGFGFVLRGAKAETPETREDRTKRLFRHYTVGSYDSLTSHSDYVIDDKVAVLQKRDHEGFGFVLRGAKAETHETREDRTKRLFRHYTVGSYDSLTSHSDYVIDDKVAVLQKRDHEGFGFVLRGAKAETHETREDRTKRLFRHYTVGSYDSLTSHSDYVIDDKVAILQKRDHEGFGFVLRGAKAET	517 566 537 536 535 535 798 577 623 594 593
Pan Canis Bos Homo Mus Rattus Xenopus Pan Canis Bos Homo Mus	QETREDRTKRLFRHYTVGSYDSFTSHSDYVIQEKVARLQKRELEGFGFVLRGAKAET ILPSETREDRTKRLFRHYTVGSYDSLTSHSDYVIDDKVAVLQKRDHEGFGFVLRGAKAETHETREDRTKRLFRHYTVGSYDSLTSHSDYVIDDKVAVLQKRDHEGFGFVLRGAKAETHETREDRTKRLFRHYTVGSYDSLSAHSDYVIDDKVAVLQKRDHEGFGFVLRGAKAETPETREDRTKRLFRHYTVGSYDSLTSHSDYVIDDKVAVLQKRDHEGFGFVLRGAKAETHETREDRTKRLFRHYTVGSYDSLTSHSDYVIDDKVAVLQKRDHEGFGFVLRGAKAET	517 566 537 536 535 535 798 577 623 594 593
Pan Canis Bos Homo Mus Rattus Xenopus Pan Canis Bos Homo Mus Rattus	QETREDRTKRLFRHYTVGSYDSFTSHSDYVIQEKVARLQKRELEGFGFVLRGAKAET ILPSETREDRTKRLFRHYTVGSYDSLTSHSDYVIDDKVAVLQKRDHEGFGFVLRGAKAETHETREDRTKRLFRHYTVGSYDSLTSHSDYVIDDKVAVLQKRDHEGFGFVLRGAKAETHETREDRTKRLFRHYTVGSYDSLSAHSDYVIDDKVAVLQKRDHEGFGFVLRGAKAETHETREDRTKRLFRHYTVGSYDSLTSHSDYVIDDKVAVLQKRDHEGFGFVLRGAKAETHETREDRTKRLFRHYTVGSYDSLTSHSDYVIDDKVATLQKRDHEGFGFVLRGAKAET	517 566 537 536 535 535 798 577 623 594 593 592
Pan Canis Bos Homo Mus Rattus Xenopus Pan Canis Bos Homo Mus Rattus	QETREDRTKRLFRHYTVGSYDSFTSHSDYVIQEKVARLQKRELEGFGFVLRGAKAET ILPSETREDRTKRLFRHYTVGSYDSLTSHSDYVIDDKVAVLQKRDHEGFGFVLRGAKAETHETREDRTKRLFRHYTVGSYDSLTSHSDYVIDDKVAVLQKRDHEGFGFVLRGAKAETHETREDRTKRLFRHYTVGSYDSLSAHSDYVIDDKVAVLQKRDHEGFGFVLRGAKAETPETREDRTKRLFRHYTVGSYDSLTSHSDYVIDDKVAVLQKRDHEGFGFVLRGAKAET	517 566 537 536 535 535 798 577 623 594 593 592 592
Pan Canis Bos Homo Mus Rattus Xenopus Pan Canis Bos Homo Mus Rattus	QETREDRTKRLFRHYTVGSYDSFTSHSDYVIQEKVARLQKRELEGFGFVLRGAKAET ILPSETREDRTKRLFRHYTVGSYDSLTSHSDYVIDDKVAVLQKRDHEGFGFVLRGAKAETHETREDRTKRLFRHYTVGSYDSLTSHSDYVIDDKVAVLQKRDHEGFGFVLRGAKAETHETREDRTKRLFRHYTVGSYDSLSAHSDYVIDDKVAVLQKRDHEGFGFVLRGAKAETHETREDRTKRLFRHYTVGSYDSLTSHSDYVIDDKVAVLQKRDHEGFGFVLRGAKAETHETREDRTKRLFRHYTVGSYDSLTSHSDYVIDDKVATLQKRDHEGFGFVLRGAKAET	517 566 537 536 535 535 798 577 623 594 593 592
Pan Canis Bos Homo Mus Rattus Xenopus Pan Canis Bos Homo Mus Rattus	QETREDRTKRLFRHYTVGSYDSFTSHSDYVIQEKVARLQKRELEGFGFVLRGAKAET ILPSETREDRTKRLFRHYTVGSYDSLTSHSDYVIDDKVAVLQKRDHEGFGFVLRGAKAETHETREDRTKRLFRHYTVGSYDSLTSHSDYVIDDKVAVLQKRDHEGFGFVLRGAKAETHETREDRTKRLFRHYTVGSYDSLSAHSDYVIDDKVAVLQKRDHEGFGFVLRGAKAETPETREDRTKRLFRHYTVGSYDSLTSHSDYVIDDKVAVLQKRDHEGFGFVLRGAKAET	517 566 537 536 535 535 798 577 623 594 593 592 592
Pan Canis Bos Homo Mus Rattus Xenopus Pan Canis Bos Homo Mus Rattus Xenopus Pan	QETREDRTKRLFRHYTVGSYDSFTSHSDYVIQEKVARLQKRELEGFGFVLRGAKAET ILPSETREDRTKRLFRHYTVGSYDSLTSHSDYVIDDKVAVLQKRDHEGFGFVLRGAKAETHETREDRTKRLFRHYTVGSYDSLTSHSDYVIDDKVAVLQKRDHEGFGFVLRGAKAETPETREDRTKRLFRHYTVGSYDSLSAHSDYVIDDKVAVLQKRDHEGFGFVLRGAKAETPETREDRTKRLFRHYTVGSYDSLTSHSDYVIDDKVAVLQKRDHEGFGFVLRGAKAETHETREDRTKRLFRHYTVGSYDSLTSHSDYVIDDKVAVLQKRDHEGFGFVLRGAKAET	517 566 537 536 535 535 798 577 623 594 593 592 592
Pan Canis Bos Homo Mus Rattus Xenopus Pan Canis Bos Homo Mus Rattus Xenopus Pan Canis Bos Homo Mus Rattus	QETREDRTKRLFRHYTVGSYDSFTSHSDYVIQEKVARLQKRELEGFGFVLRGAKAET ILPSETREDRTKRLFRHYTVGSYDSLTSHSDYVIDDKVAVLQKRDHEGFGFVLRGAKAETHETREDRTKRLFRHYTVGSYDSLTSHSDYVIDDKVAVLQKRDHEGFGFVLRGAKAETPETREDRTKRLFRHYTVGSYDSLSAHSDYVIDDKVAVLQKRDHEGFGFVLRGAKAETPETREDRTKRLFRHYTVGSYDSLTSHSDYVIDDKVAVLQKRDHEGFGFVLRGAKAETHETREDRTKRLFRHYTVGSYDSLTSHSDYVIDDKVAVLQKRDHEGFGFVLRGAKAETHETREDRTKRLFRHYTVGSYDSLTSHSDYVIDDKVAILQKRDHEGFGFVLRGAKAET ************************************	517 566 537 536 535 535 798 577 623 594 593 592 592
Pan Canis Bos Homo Mus Rattus Xenopus Pan Canis Bos Homo Mus Rattus Xenopus Pan Canis Bos Homo Mus Rattus	QETREDRTKRLFRHYTVGSYDSFTSHSDYVIQEKVARLQKRELEGFGFVLRGAKAET ILPSETAEDRTKRLFRHYTVGSYDSLTSHSDYVIDDKVAVLQKRDHEGFGFVLRGAKAETHETREDRTKRLFRHYTVGSYDSLTSHSDYVIDDKVAVLQKRDHEGFGFVLRGAKAETHETREDRTKRLFRHYTVGSYDSLSAHSDYVIDDKVAVLQKRDHEGFGFVLRGAKAETPETREDRTKRLFRHYTVGSYDSLTSHSDYVIDDKVAVLQKRDHEGFGFVLRGAKAETHETREDRTKRLFRHYTVGSYDSLTSHSDYVIDDKVAVLQKRDHEGFGFVLRGAKAETHETREDRTKRLFRHYTVGSYDSLTSHSDYVIDDKVAILQKRDHEGFGFVLRGAKAETHETREDRTKRLFRHYTVGSYDSLTSHSDYVIDDKVAILQKRDHEGFGFVLRGAKAET	517 566 537 536 535 535 798 577 623 594 593 592 592 858 637 683 654 653
Pan Canis Bos Homo Mus Rattus Xenopus Pan Canis Bos Homo Mus Rattus Xenopus Pan Canis Bos Homo Mus Rattus	QETREDRTKRLFRHYTVGSYDSFTSHSDYVIQEKVARLQKRELEGFGFVLRGAKAET ILPSETREDRTKRLFRHYTVGSYDSLTSHSDYVIDDKVAVLQKRDHEGFGFVLRGAKAETHETREDRTKRLFRHYTVGSYDSLTSHSDYVIDDKVAVLQKRDHEGFGFVLRGAKAETPETREDRTKRLFRHYTVGSYDSLSAHSDYVIDDKVAVLQKRDHEGFGFVLRGAKAETPETREDRTKRLFRHYTVGSYDSLSHSDYVIDDKVAVLQKRDHEGFGFVLRGAKAETHETREDRTKRLFRHYTVGSYDSLTSHSDYVIDDKVAVLQKRDHEGFGFVLRGAKAETHETREDRTKRLFRHYTVGSYDSLTSHSDYVIDDKVAILQKRDHEGFGFVLRGAKAETHETREDRTKRLFRHYTVGSYDSLTSHSDYVIDDKVAILQKRDHEGFGFVLRGAKAET	517 566 537 536 535 535 798 577 623 594 593 592 592
Pan Canis Bos Homo Mus Rattus Xenopus Pan Canis Bos Homo Mus Rattus Xenopus Pan Canis Bos Homo Mus Rattus	QETREDRTKRLFRHYTVGSYDSFTSHSDYVIQEKVARLQKRELEGFGFVLRGAKAET ILPSETREDRTKRLFRHYTVGSYDSLTSHSDYVIDDKVAVLQKRDHEGFGFVLRGAKAETHETREDRTKRLFRHYTVGSYDSLTSHSDYVIDDKVAVLQKRDHEGFGFVLRGAKAETHETREDRTKRLFRHYTVGSYDSLSAHSDYVIDDKVAVLQKRDHEGFGFVLRGAKAET	517 566 537 536 535 535 798 577 623 594 593 592 592 858 637 683 654 653
Pan Canis Bos Homo Mus Rattus Xenopus Pan Canis Bos Homo Mus Rattus Xenopus Pan Canis Bos Homo Mus Rattus	QETREDRTKRLFRHYTVGSYDSFTSHSDYVIQEKVARLQKRELEGFGFVLRGAKAET ILPSETREDRTKRLFRHYTVGSYDSLTSHSDYVIDDKVAVLQKRDHEGFGFVLRGAKAETHETREDRTKRLFRHYTVGSYDSLTSHSDYVIDDKVAVLQKRDHEGFGFVLRGAKAETPETREDRTKRLFRHYTVGSYDSLSAHSDYVIDDKVAVLQKRDHEGFGFVLRGAKAETPETREDRTKRLFRHYTVGSYDSLSHSDYVIDDKVAVLQKRDHEGFGFVLRGAKAETHETREDRTKRLFRHYTVGSYDSLTSHSDYVIDDKVAVLQKRDHEGFGFVLRGAKAETHETREDRTKRLFRHYTVGSYDSLTSHSDYVIDDKVAILQKRDHEGFGFVLRGAKAETHETREDRTKRLFRHYTVGSYDSLTSHSDYVIDDKVAILQKRDHEGFGFVLRGAKAET	517 566 537 536 535 535 798 577 623 594 593 592 592
Pan Canis Bos Homo Mus Rattus Xenopus Pan Canis Bos Homo Mus Rattus Xenopus Pan Canis Bos Homo Mus Rattus	QETREDRTKRLFRHYTVGSYDSFTSHSDYVIQEKVARLQKRELEGFGFVLRGAKAET ILPSETREDRTKRLFRHYTVGSYDSLTSHSDYVIDDKVAVLQKRDHEGFGFVLRGAKAETHETREDRTKRLFRHYTVGSYDSLTSHSDYVIDDKVAVLQKRDHEGFGFVLRGAKAETHETREDRTKRLFRHYTVGSYDSLSAHSDYVIDDKVAVLQKRDHEGFGFVLRGAKAET	517 566 537 536 535 535 798 577 623 594 593 592 592
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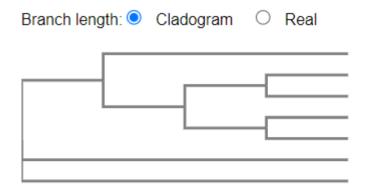
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US IDERLLGTGATTGRDLLLPSPVSALKPLVGGPNLGPSSSTFIHPLTGKPLDPSSPLAL :****** **:***** *: * * **************	5		
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ALAARERALASQTPSRSPTPVHSPDADRPGPLFVDVQTRDSERGPLASPAFS us ALAARERALASQTPSRSPTPVHSPDADRPGPLFVDVQTRDSERGPLASPAFS 1164 ********::*:	10	ALAARERALASQAPSRSPTPVHSPDADRPGPLFVDVOARDPERGSLASPAFS	1162
US ALAARERALASÕTPSRSPTPVHSPDADRPGPLFVDVÕTRDSERGPLASPAFS *********: * * *:****:** ***::*: * * ***::* PUS PSGAQIKGQWVTPLRRDGDVRPDKSPERPVSKVEERKPMILSIVDTSQQKTAGLIMVHAT 1424 PRSPAWIPVPARREAEKVPREERKSPEDKKSMILSVLDTSLQRPAGLIVVHAT 1174 S PRSPAWVPVPARREPEKAPREERKSPEDKKSMILSVLDTSLQRPAGLIVVHAT 1238 PRSPAWVPVPARREPEKVPREERKSPEDKKSMILSVLDTSLQRPAGLIVVHAT 1217 PRSPAWIPVPARREAEKVPREERKSPEDKKSMILSVLDTSLQRPAGLIVVHAT 1215 PRSPAWIPVPARREAEKVPREERKSPEDKKSMILSVLDTSLQRPAGLIVVHAT 1216			
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PRSPAWIPVPARREAEKPPREERKSPEDKKSMILSVLDTSLQRPAGLIVVHAT 1216		PRSPAWIPVPARREAEKVPREERKSPEDKKSMILSVLDTSLQRPAGLIVVHAT PRSPAWVPVPARREPEKAPREERKSPEDKKSMILSVLDTSLQRPAGLIVVHAT	1174 1238
•	is	PRSPAWIPVPARREAEKVPREERKSPEDKKSMILSVLDTSLQRPAGLIVVHAT PRSPAWVPVPARREPEKAPREERKSPEDKKSMILSVLDTSLQRPAGLIVVHAT PRSPAWVPVPARREPEKVPREERKSPEDKKSMILSVLDTSLQRPAGLIVVHAT	1174 1238 1217
us PRSPAWIPVPARREAEKPTREERKSPEDKKSMILSVLDTSLQRPAGLIVVHAT 1217	is	PRSPAWIPVPARREAEKVPREERKSPEDKKSMILSVLDTSLQRPAGLIVVHAT PRSPAWVPVPARREPEKAPREERKSPEDKKSMILSVLDTSLQRPAGLIVVHAT PRSPAWVPVPARREPEKVPREERKSPEDKKSMILSVLDTSLQRPAGLIVVHAT PRSPAWIPVPARREAEKVPREERKSPEDKKSMILSVLDTSLQRPAGLIVVHAT	1174 1238 1217 1215
	is D	PRSPAWIPVPARREAEKVPREERKSPEDKKSMILSVLDTSLQRPAGLIVVHAT PRSPAWVPVPARREPEKAPREERKSPEDKKSMILSVLDTSLQRPAGLIVVHAT PRSPAWVPVPARREPEKVPREERKSPEDKKSMILSVLDTSLQRPAGLIVVHAT PRSPAWIPVPARREAEKVPREERKSPEDKKSMILSVLDTSLQRPAGLIVVHAT PRSPAWIPVPARREAEKPPREERKSPEDKKSMILSVLDTSLQRPAGLIVVHAT	1174 1238 1217 1215 1216

Xenopus	SNGTEEKEQEPPATTDKQKVEQPPDIEEKAPSSSSSDKTLGQGSSE	1470
Pan .	SNGQEPSRLGGAEEERPGTPELAPAPMQSAAVAEPLPSPRAQPPGGT-PADAGPGQGSSE	1233
Canis	SNGOEPSGLG-AEEERPSTPELAPAPPOSAVAAEPLASPRAOPPGSAPPTDPGPGOGSSE	1297
Bos	SNGHEPSGLG-AEEORPGTPELAPAPTOSAVVAEPLPSPRAOPPGSA-PTDPGPGOGSSE	1275
Homo	SNGOEPSRLGGAEEERPGTPELAPAPMOSAAVAEPLPSPRAOPPGGT-PADAGPGOGSSE	1274
Mus	SNGQEPSRLG-AEEERPGTPELAPAPMQAAAVAEPMPSPRAQPPGSI-PADPGPGQGSSE	1274
Rattus	SNGOEPNRLG-AEEERPGTPELAPTPMOAAAVAEPMPSPRAOPPGNI-PADPGPSOGNSE	1274
Raccus	*** *	12/5
Xenopus	EEV-EPFGGNLPPAMLSSSDEETREELAKIGLVPPPDAFANGVLVTKPGTPISQLTRPGT	1529
Pan	EEPELVFAVNLPPAOLSSSDEETREELARIGLVPPPEEFANGVLLATPLAGPGP	1287
Canis	EEPELVFAVNLPPAOLSSSDEETREELARIGLVPPPEEFANGVLLATPLPGPGP	1351
Bos	EEPELVFAVNLPPAOLSSSDEETREELARIGLVPPPEEFANGVLLATPLPGPGP	1329
Homo	EEPELVFAVNLPPAOLSSSDEETREELARIGLVPPPEEFANGVLLATPLAGPGP	1328
Mus	EEPELVFAVNLPPAQLSSSDEETREELARIGLVPPPEEFANGILLTTPPPGPGP	1328
Rattus	EEPKLVFAVNLPPAOLSSNDEETREELARIGLVPPPEEFANGILLATPPPGPGP	1329
	** * ***** *** ******** **** *** **	
Vananus	LAVIDS AVOASST DESCRIPCION DUDUDES AT DESCRIPCION DE SECONDUIU ETTETTETRES DE	4500
Xenopus	LAVPSAKQASSTPPSGKPSDAPHPHPESATDSGVEEVDTRSSSDHHLETTSTISTVSSMS	1589
Pan Canis	SPTTVPSPASGKPSSEPPPAPESAADSGVEEADTRSSSDPHLETTSTISTVSSMS	1342
	SPTTVPGPASGKPSSEPPPAPESAADSGVEEADTRSSSDPHLETTSTISTVSSMS	1406
Bos	SPTTVPGPASGKPSSEPPPAPESAADSGVEEADTRSSSDPHLETTSTISTVSSMS	1384
Homo	SPTTVPSPASGKPSSEPPPAPESAADSGVEEADTRSSSDPHLETTSTISTVSSMS	1383
Mus	LPTTVPSPASGKPSSELPPAPESAADSGVEEADTRSSSDPHLETTSTISTVSSMS	1383
Rattus	LPTTVPSPASGKPSSELPPAPESAADSGVEEADTRSSSDPHLETTSTISTVSSMS : * ***** * **************************	1384
Xenopus	TLSSESGEPTDTYTSYADGQTFILEKPPVPPKPKLKSQLMKGTVTFRDPLLKQSSDSELI	1649
Pan	TLSSESGELTDTHTSFADGHTFLLEKPPVPPKPKLKSPLGKGPVTFRDPLLKQSSDSELM	1402
Canis	TLSSESGELTDTHTSFADGHTFLLEKPPVPPKPKLKSPLGKGPVTFRDPLLKQSSDSELM	1466
Bos	TLSSESGELTDTHTSFADGHTFLLEKPPVPPKPKLKSPLGKGPVTFRDPLLKQSSDSELM	1444
Homo	TLSSESGELTDTHTSFADGHTFLLEKPPVPPKPKLKSPLGKGPVTFRDPLLKQSSDSELM	1443
Mus	TLSSESGELTDTHTSFADGHTFLLEKPPVPPKPKLKSPLGKGPVTFRDPLLKQSSDSELM	1443
Rattus	TLSSESGELTDTHTSFADGHTFLLEKPPVPPKPKLKSPLGKGPVTFRGPLLKQSSDSELM	1444
	******* ***;**;**;******** * ** ****,*******;	
Xenopus	AQQQLAAGRPRYLFQRRSKLWGDPVESRPLSHGGPVEMEKPSVIGEISSR	1699
Pan	AQQHHAASAGLASAAGPARPRYLFQRRSKLWGDPVESRGLPGPEDDKPTVISELSSR	1459
Canis	AQQHHAASAGLASAAGPARPRYLFQRRSKLWGDPVESRGLPGPEDDKPTVISELSSR	1523
Bos	AQQHHAATAGLASAAGPARPRYLFQRRSKLWGDPVESRGLPGPEDDKPTVITELSSR	1501
Homo	AQQHHAASAGLASAAGPARPRYLFQRRSKLWGDPVESRGLPGPEDDKPTVISELSSR	1500
Mus	AOOHHAASTGLASAAGPARPRYLFORRSKLWGDPVESRGLPGPEDDKPTVISELSSR	1500
Rattus	AOOHHATSTGLTSAAGPARPRYLFORRSKLWGDPVESRGLPGPEDDKPTVISELSSR	1501
	*** * *********** * * *****	2302
Xenopus	LQLLNKDTRSLGEEPSIPGMDPVKKSPVVAARLFSSLGELHTISQR	1745
Pan	· ·	1518
	LQQLNKDTRSLGEEPVGGLGSLLDPAKKSPIAAARCRSPMVGLRLFSSLGELSSISA-QR	
Canis	LQQLNKDTRSLGEEPVGGLGGLLDPAKKSPIAAARLFSSLGELSTISA-QR	1573
Bos	LQQLNKDTRSLGEEPAGGLGGLLDPAKKSPIAAARLFSSLGELSTISAQQR	1552
Homo	LQQLNKDTRSLGEEPVGGLGSLLDPAKKSPIAAARLFSSLGELSSISA-QR	1550
Mus	LQQLNKDTRSLGEEPVGGLGSLLDPAKKSPIAAARLFSSLGELSTISA-QR LOOLNKDTRSLGEEPVGGLGSLLDPAKKSPIAAARCAVVPSAGWLFSSLGELSTISA-OR	1550
Rattus	** ********** :** ******* :**	1560
Xenopus	SYGTSYTVRPGSRHPLTRRAPSPVPPSS-ERVEPLGGARSYTLTPPTILK	1794
Pan	SPGGPGGGASYSVRPSGRYPVARRAPSPVKPASLERVEGLGAGAGGAGRPFGLTPPTILK	1578
Canis	SPGGPGGGASFPVRPGGRYPVARRAPSPVKPASLERVEGLGAGAGGAGRPFGLTPPTILK	1633
Bos	SPGGPGGGASYPVRPGGRYPVARRAPSPVKPASLERVEGLGAGAGGAGRPFGLTPPTILK	1612
Homo	SPGGPGGGASYSVRPSGRYPVARRAPSPVKPASLERVEGLGAGAGGAGRPFGLTPPTILK	1610
Mus	SPGGPGGGASYSVRPSGRYPVARRAPSPVKPASLERVEGLGAGVGGAGRPFGLTPPTILK	1610
Rattus	SPGGPGGASYSVRPSGRYPVARRAPSPVKPASLERVEGLGAGVGGAGRPFGLTPPTILK *:*: *** .*: .******* *:* **** ** .* .* .* .* .* .********	1620
Xenopus	SSSLSVPHEPKEVRFVVRSVSARSRSPSPSSGHPLHPARPFMQKPLSLWNK	1845
Pan	SSSLSIPHEPKEVRFVVRSVSARSRSPSPSPLPSPASGPGPGAPGPRRPFQQKPLQLWSK	1638
Canis	SSSLSIPHEPKEVRFVVRSVSARSRSPSPSPLPSPAPGPGPGAPGPNRPXQQKPLQFWSK	1693
Bos	SSSLSIPHEPKEVRFVVRSVSARSRSPSLSPLPSPAPGPGPGAPSPRRPFQQKPLQLWSK	1672
Homo	SSSLSIPHEPKEVRFVVRSVSARSRSPSPSPLPSPASGPGPGAPGPRRPFQQKPLQLWSK	1670
Mus	SSSLSIPHEPKEVRFVVRSVSARSRSPSPSPLPSPSPGSGPS-AGPRRPFQQKPLQLWSK	1669
Rattus	SSSLSIPHEPKEVRFVVRSASARSRSPSPSPLPSPSPGSGPS-AGPRRPFQQKPLQLWSK ****:********************************	1679
Xenopus	YDVGDWLESLNLAEHRLKFQDNEIEGSHLPALTKDDFVELGVTRVGHRMNIERALRQLST	1905
Pan	FDVGDWLESIHLGEHRDRFEDHEIEGAHLPALTKDDFVELGVTRVGHRMNIERALRQLDG	1698
Canis	FDVGDWLESIHLGEHRDRFEDHEIEGAHLPALTKDDLVELGVTRVGHRMNIERALRQLDG	1753
Bos	FDVGDWLESIHLGEHRDRFEDHEIEGAHLPALTKDDFVELGVTRVGHRMNIERALROLDG	1732
	-	
Homo	FDVGDWLESIHLGEHRDRFEDHEIEGAHLPALTKDDFVELGVTRVGHRMNIERALRQLDG	1730
	-	

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Xenopus S 1906
Pan S 1699
Canis S 1754
Bos S 1733
Homo S 1731
Mus S 1730
Rattus S 1740
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Phylogenetic Tree

This is a Neighbour-joining tree without distance corrections.

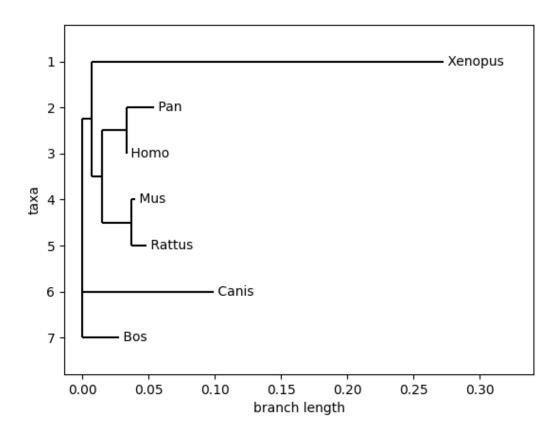


Xenopus 0.26523 Pan 0.0208 Homo -0.00023 Mus 0.0029 Rattus 0.01097 Canis 0.09914 Bos 0.02783

Tree Data

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(
(
Xenopus:0.26523,
(
(
(
Pan:0.02080,
Homo:-0.00023)
:0.01844,
(
Mus:0.00290,
Rattus:0.01097)
:0.02226)
:0.00777)
:0.00722,
Canis:0.09914,
Bos:0.02783);
```

Poprzez biopythona:



3. Dystanse.