

Appendix S1. The nucleotide and amino acid sequences of identified 22 SIRBZ genes download from SOL Genomics Network.

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>SIRBZ4

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YFDHKKRDEDKMIENLGFSLTGVAEDEGDFTRDWKTAQTAVLNFGKDRFDMRLSLSRQDLQILVGYGCPSTD  
KKVVFSSKLLRKHVHLDGEDVCSSCNLRSSCERAYLLTNKEDEARTMDVMRVLLTFGFNAINGSVDNESLMKKK  
SVKTVVRKLLHEIVKLSAVPIDPNLPPPVKPPKVPKQPPPPRKRVRGRDDIEMKKGDWLCPKCDFMNF AKNT  
ICLQCDANRPKRQLLPGEWECSCNLFNYYRRNVVCFHCECKRPVDDYMVAQQQERLQGSRTQMDKISR RQD  
VSNAWNFDDEDDDES DGADIAAFETADSRKLGEDFPLDRQERRDTSRSNEDGFHKSSRPPKGYETEPAPGKPG  
VGFNDFDDEDDVDSYEIDSNGANRSSKIDFSIEVNSESEDIDSVDLTVGRRNSSPASDAHFRQRHQKGAF  
RGSEDAEVDFTDDELPIKTNMRSSQVSYSKPRSRNKGAKSFDSDDDYGLSSDSDRDRFSQQNKG NKWGSR  
KEFGRRSSSYSEDEPFSDSESNGRSFHKNKQRGGKAGQNGRWDSSEVGGDGIRDKRSSFRDNMKRSPRDLR  
GSSRRSQDNGYNDYRSRGREESYKQQRGRNSNYGDQSDSYLDDERHRRPRINVR

>SIRBZ5

MVSISKILFTLLPKIKLNLNPTMSWSCSSCTFLNPPSQKSSCQICLSDSPSSISSDPSISVQPKWPCKACTFMNPY  
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RKNREEPSGVEDDEVDAAAMGYRGIAAATAIEQNSVEQEPGKTFSTSKSVLKILTYNVWFADIE MNKRMK  
AIGNLISLHKPDVICFQEVTP EYDIFQHSGWWKMYSCSISNVMELTIGYFCMQLSKLAVKSYSCKPFSNSIMGR  
ELCIAEIEVEKDTLLVATSHLESPCPGPPKWDQMYSKERVQQAKEAVELLDRKRN VVFCGDMNWDDKLDGQ  
FPPTDGWIDAWGKMKPEEIGWYDTKSNKMLSANRTLQKRLDRIACKLQDFCITDVKMIGKDAIPNLTYIKEK  
VKSEVKKLTLPVLPSDHYGLLLEIS PQ

>SIRBZ6

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QTPGV PYASQTNQLLPVPNGWRNGDWLCSG FHNYSRAQCKKCNASAPPASSSSLATTPITALGTRKRLASEEL  
VHDWDNKRNLNAGHTFGYQQGYPGA EWMGDSGGNQLTAIPTIFLNENSMVLPLQANMQIPRVPAAPTLLGK  
GAKQWRDGDWMCTNCSNHNYASRSNCNRCKSERDVPTQPVTV A

>SIRBZ7

MSASRLFFLLGASTVRNCNKPTNISSPFPFRFSKPLLCPVVRFRSYNCTSATLETKTIEPLVSPRNHPWPEWVAF  
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KRLRIHLNLDEGEVCGACNFRGSCDRAYLILKESEG VARTVDIVRVLLIYAFDSAVISSGAMP PGSELIEVSARQLLS  
ELVELSETPIDPDHLPAPKASPRKKESVGSRTD GLEDVEMKRRNSTGLEGEMPKRNVEMKQGDWICSQCTFM  
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>SIRBZ8

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KSHPHPERPDLRTIAASLATAGIFPGKCHPIAREITREELQMIHSEENIEAVDNTKRMHASYFTPD TYANEYSA  
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VHHGNGTQEIFERSKSVLYISLHRHEGGRFYPTGAADEVGSMGAEGYCVNIPWSRGGVSDNDYIFAFEQVVL  
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>SIRBZ9

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YTGGMGNGGMYGVPLMDRYGVALPMAAPMAPRPGFYDDNSQKKDGTDRDNDWACPKCGNVNFSFRT  
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DQ

>SIRBZ10

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DHKANSFPELHVLVFRSCVILFCYYLMNTYDFACAAQGPETILPVSTLPFEWFSLILQYAHFCGRGFNWRHQ  
EVQNLHRQLQALVAMSQGITLLPEKSLFFNYERPYYQEYAVGFSGLFAMKIILNAQSHDYTYVHGLLVPTRYA  
AWAELILIQMFVPGVSFLGHLGAILAGLLFLCLKASYSGANPLRTIIRGFGHALNWPLMFMNCLFRRQIIGGRGT  
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>SIRBZ11

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NPNVRPRDGDWMCTDPLCNNLNFARRENCNKCKRPRYAPPGSPRRGYSPPPHHRNPGPPINRSPGRFVNG  
YRSPPRGWARDPRDFRAGVPHSRFEGRFADPPIRRDRPAFADADGRDRSRFERPPALDWGHRERGRDSYLS  
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>SIRBZ12

MERGRGQWGSVFRGMIPLGLHTLSEYSRLDRKPPITAALLAANTIIYLRPKFIHPFLPTIDQVWFNPHLILKYTD  
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YSVGFSGLFAMKVIVNSQSDYTSVHGLMVPTRYAAWAEVLVQMFVPGVSFLGHLGGILAGLLYLQLKASYS  
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>SIRBZ13

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RLRLLFGIEEGNVCSFCILRGSCERAYAVPHKDQGGRTVDVMRLLLTYGLNPITGAVENTKPSLNKRVEESARKLLK  
EIVNFSSEELFCETKKSTNPWNPSVQRDHEEGQINALRKHGDWVCPECNFLNFSRNAKCLRCNGLNHERLNKL  
RQEQDHLPLKKGDWICSKCHFMNFAKNTRCLQCTEKPPKRHLNPGEWECESCNYINFKRNTVCLKCDHRRPK  
ASSCAGSSCGSANQSRISRTRPYFGELENEETDEEWQLIESEREDRLSSMPENEVDFPVLGGNSELSRDAKKQ  
ERWKTGNKRENGDELNKKYFQNSGNEEMDEWFGHKNV

>SIRBZ14

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RLGCNEHNFASRMECFRCNAPRDLAGNKSSY

>SIRBZ15

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AVGHWPOQTRRRSYEEVYPVERDSRRHEKPPARYVGREHDDPYDDYDYKHRMAHPNREDSRERDYEYSRYSD  
SDYERGSRRDDNWRRRRESHERERDKESSRERDPSPYRRHERSRSRGHDDRRLSRSPRSRSHSRSHREDSYD

DGRYDRSERRRRDRDDKRYHDNYSVAPSATVVVKGLSQKTTEEDLYQILAEWGPLRHVRVIKERNSGISRGFADFID  
FPSVDAAQAMMDKLGDEGLVVDGRKLFFEYSSKPTGGPGGPGGLDNASRSNHGHRSMTPVPSDWMCTICG  
CVNFARRTSCFCQNEPRTDDAPPADMASSNSSSLGRRGEAGPTHVLVVRGLDENADEEMLRYEFSKHAPIKDL  
RLVRDKFTHVSRGFAFVHFYSVEEASKALEATNGTTLEKNGQLLRVAYAKSILGPGSGTSQASSLAAAIEAATFS  
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NGIWYTYDQKTQQYLPCTNQENKPAAGQTETAKSSDGSNTKKVIISAPASTIAGEKAASLPDAIQAAASAAIA  
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SGPTSLINADASAAPFRTDASALGSYTPPVAGSKRRFSEMPSPPPSIKEQSQTAYRDRAAERRSLYGSSSAF  
GDDASEHGDSNRDSTFRRGVFDPTFPFPGVGGGSAEANSQSFEVITADRAIDESNVGNRMLRNMGWQEG  
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>SIRBZ16

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YPRKEISAAACGHPFCFTCWQGYISTSITDGPGLMLRCPDPSCSAIGLDMINKLASDDDKKYNRYFIRSFVE  
DNRKTKWCPAPGCDYAVDYIVGSGSYDVTGCSYSFCWNCTEETHRPVDCGTVSKWILKNSAESENMNWILA  
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AYGYLPEHEHAKRQFFEYLQGEAESGLERLHQCAEKELQGYLDAEGPSREFNEFRTKLAGLTSVTRNYFENLVR  
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CQQR

>SIRBZ17

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SAKAWQQDGDWLCNPNTSCTNVNFAFRGVCNRCGTARPAGAGGGGAGAAGRGRGRGSQDPGAPGRAVGG  
PPGLFGPNDWACPMCANINWAKRNKCNICNTNKPQHNEGGVVRGGRAGGYKELDEEIEETRRRRREAEDD  
GEMYDEFNLLKKFRAKTQRAEAAQSLPPGVGRAGWEAEELGVAERDRKERSRERSRDYDDRERARHRSR  
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>SIRBZ18

MSRDGDWMCAACQHLNFKKRDACQRCSCPXYASPADVAMYGLNKTEVLAGDWYCSGMNCGSHNYASRTS  
CYRCGALKSDYYGIGVGMMAPTYGYDSSALPGWKSGDWICSRLGCGMHNYASRAECYKCKTPRDFGGDM  
RESELY

>SIRBZ19

MSREGDWMCSACQHLNFKKRDACQRCSCPXYATSADVAMYGLSKTDVLAGDWYCSAMNCGSHNYASRTSC  
YRCGSSKSDYYGMGVGMMAPAGYGYDASAIPGWKSGDWICSRLGCGMHNYASRAECYKCKTPRDFGEPSAI

>SIRBZ20

MELNFLAFQLLHKVTVFNIYGQKMSMEGDWMCAACQHLNFKKRDACQRCSCPXYATTTDVYMYGLNKTE  
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MHNYASRAECYKCKMPRDFGEPSM

>SIRBZ21

MNLGDLNKVWEIKALKRKPKEEANKILEKIAKQVQPIMRKHNNRVKLLSEFCPKRAALLGLNVGAGIHVKLRL  
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QPSMSSLRQTAAAAAENRARLKSLLPSGPRRLGGDHSIKSALTPIQAAAAAAERRLQDNIWCGSELCELDLDE  
TSDALPETLPLGHTSDRSKLSNGFDSLSSKVTSRKRRESNSVSSSKSLHGHTVTKPVSKPLSNHDKIEAHRVGQV

EGKSHNVASRGYTESFIDLTGNSSSSTSIHGHDDLHGPNESMMWECLMCTLLNPPLAPLCKVCQTQKPKDVDD  
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>SIRBZ22

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TAKVRRDNMKDRGSSIKSRGYHGVMSNVGNMSVSSNPRNAESRIAPSRSQTKPQKIVCTDQLEDKLNQLNLAI  
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QN