

Table S4 The protein sequences encoded by transcripts of key genes.

Gene	Protein sequence of transcripts with the highest identity expressed in D2 samples (<i>Rosa chinensis</i> 'Mutabilis')	Corresponding genome protein id in rose genome (<i>Rosa chinensis</i> 'Old Blush')	Identity
<i>RcUF3GT1</i>	MAPASNQVGGHVAVLAFPFSTHAAPLLNIVCRLAAAAPNTLFSFFNTK QSNLILASNTSILRNSNVRVCEVADGVPEGYVFGKQEDIELFMKA APDNFRRCLELSVAETGRKVSCLVTDAFFWFGAHMADDLGGLPWVP FWTAGPASLSTHVHTDLIRNTTSMGGHVGNETITVIAGMSKVRPQDLP EGHIFGKLDLSFSRMLHQMLPLATAVFINSFEELDPVITNDLKSKF KRYLNVGPFDLLESPAPAAATTLQTGDVVVGGDCLSWLDKQKAASV VYVSFGSVTRPSPEELMALAEALEASRVPLWSLRNNLKTPLKDEFISK AELNGMVVPWVPQPQVLAHGSVGFVTHCGWNSVLESVAGGVPMIC RPFQDQKLNARMVEDEWKIGLKLEGGVFTKNGMLKSLDILLSQKKG NIMRDKINTFKQLAQQAQAVEQKGSSTRNFESLLEVISTAN	RchiOBHm_Chr1g0383951	97.86%
<i>RcGSTF2</i>	MVVKVYGPVRAACPQRVMVCLLEKGVFEFVHVVDLQAGEQKPHIL ARQPFQVPAIEDGNFKLFESRAIVRYAAKYADRGPNNLGTTLLEEKAL VDQWLEVESHNFNDLVYAVVLQVLVPLSMGETSDLALVRACEEKLK VFDVYEERLSKSTYLAGRSFTLADLSHLPAIRFLMDEVKMGHLVTERK NVTAWWEKISNRPAWKLMRLAQY	RchiOBHm_Chr3g0488551	100%
<i>RcABCC2b</i>	GGTGEGKTSLSIAMLGELPPIAGASVIRGTVAYVPQVSWIFNATVREN ILFGSEFEAARYWKAIDVTEFHDLDLLPGRDLTEIGERGVNISGGQKQ RVSMARAVYSNSDVYIFDDPLSALDAHVAREVFNHCIKEELQKTRVL VTNQLHFLPQVDEIILVSDGTIKEKGTFKDLSNSLLFQKLMENAGKM EEHVEEQEASKTDKQETSLPVSNGVANDLPKDTNYTKKGGKGMRSVLI RQEERETGVVSWKILQRYKHALGGLWMVMVLFTCYTLTEVLRVSSST WLSFWTDQSTSKSYAPGFYILYAILSIGQVTVTLTNSFWLITSSLRAAR KLHDALLHAILKAPMVFFHTNPIGRIINRFAKDLGDIDRNVANFMNMF LGQVWQLLSTFVLIGIVSTISLWAIMPLLILFYAAYLFYQSTSREVKRM SITRSPVYAQFGEALNGLSSIRAYKAYDRMANISGRSMDNNIRFTLVNIS SNRWLTIRLETGGIMIWIATFAVM	RchiOBHm_Chr5g0015441	33.73%
<i>RcPAL2</i>	METITQNGNHQNGIQSGSLDDLCVKTESLKAELSVSDPLNWGAAAEL MAGSHLDEVKRMVAEYRKPVVKLGKSLTISQVAIANHDSGVKVEL AESARAGVKASSDWMESMNGTDSYGVTTFGATSHRRTKQGAAL QKELIRFLNAGVFGNGTESHTLPHSATRAAMLVRINTLLQGYSGIRFEI LEAITKFLNHNITPCLPLRGTTASGDLVPLSYIAGLLTGRPNKAVGPK GETLNAAQAFEQVGISSGFELQPKEGLALVNGTAVGSGLASTVLFETN ILALLSEILSAIFAEVMQKPEFTDHLTHKHKHHPGQIEAAAIMEYILDG SDYVKAACKLHEQDPLQPKQDRYALRTSPQWLGPIEVIRFSTKSIER EINSVNDNPLIDVSRNKALHGGNFQGTPIGVSMNTRLAIASIGKLMFA QFSELVNDFYNNGLPSNLSGGRNPSLDYGFKGAEIAMASYCSELQFLA NPVTNHVQSAEQHNQDVNSLGLISSRKTAEAVDILKLMSSTFMVALCQ AIDLRHLEENLKSTVKNSVSQLAKRLLTTGVNGELHPSRFCEKDLLMV VEREYLFAYIDDPCSATYPLMQRLRQVLVEHALTNGENEKNANTSIFQ KISAFEEELKTIKPEVESARAAYESGNAIPNRIIECRSYPLYKRVREEL GGEFLTGEKFRSPGEECDKVFTAMCQGGKIIDPILDCLSGWNGEPLPIC	RchiOBHm_Chr3g0469861	99.59%