

Phylogenetic tree of DrybOBPs

>OR797799 DrybOBP1 odorant binding protein 1, complete cds [Diorhabda rybakowi Weise]

ATGAAGACTGTTCTAGTAATTACTCTGTTGATTGCCGTAACCTGGCTGGTCAACGTAAAGATGAAATACAAG
CAGCTGTCAAAGCCTGTGATGGTGAATACGAAGGACCGAATGATTTAAGAAAATTAGTTATGGAAAAAGAT
GCTGACAAAGTCAAATTGGGCGAAAAAATATTTTGCATCAACAAGAAAATTGGGTTGCAAAAAGAAAATGG
GGATATCGATGAAGAAGTATTCATAAAAGATTTCGGAGCATATCAAAGATGACATTTTCAAAGAGAAAAGTGAA
AGTATGTATGAAACGAGATGGGGTCACTCCAGAAGAAGCTGCTTTTAACTACTTGAAATGTGTTCAATCTACT
TTACAATCAGTTCATGCATAG

> DrybOBP1

MKTVLVITLLIAVTLAGQRKDEIQAAVKACDGEYEGPNDLRKLVMKEDADKVKLGEKIFCINKKIGLQKENGDIID
EEVFIKDSEHIKDDIFKEKVKVCMKRDGVTPEEAAFNYLKCVQSTLQSVHA

>OR797786 DrybOBP2 odorant binding protein 2, complete cds [Diorhabda rybakowi Weise]

ATGAAGGTTGTTTTCTATTTTCTCTGGTTATTTCCATATCTTTGGCAAATCCATAGAAGAGATAAAAAGAATT
GAAAGCGGCTTACAAAGAATGCGGTGGTGAATTCGAAGGGCCAAATAGTGTGAAAGCACAAGTTTTAAAA
GAAAATGTGGACAAAGTTAAATTGGGCGAAACTATTTTTTGTATCAATAAGAAGATAGGTTTGCAAATGAT
AATGGAACATCGATGAACAAATTTTCAGAAAATCCCTGCAATTTAAGCTTTCAGACGAATCTTTGATTAAACA
AAGTAGCCAAAGAATGTTCTAAACGTGAAGGTGATACTAATGAAGTTATAGCTTTAATTTTTTGAAATGTTAT
CAATTTATGATTAAGAATAATTTGAACTAG

>DrybOBP2

MKVVFIFSLVISLANSIEIEIKELKAAYKECGGEFEGPNSVKAQVLKENVDKVKLGETIFCINKKIGLQNDNGNIDE
QIFRKSQFKLSDESINKVAKECSKREGDTNEVIAFNFLKCYQFMIKNNLN

>OR797787 DrybOBP3 odorant binding protein 3, complete cds [Diorhabda rybakowi Weise]

ATGCACCTCTCCGTATTGCTTTATTTTGTGTTTCGCTGTGGTATCAGCCGAAATAAGTAACGAACCAGAAGA
ATCCTTCAAGAAAATACATGACCAATGCCAATTAGACCCGCTTACAAGTAAATGAAGCTATTTTCGATAAA
ATAAGACATGGTGAGAAAGTCACCGATCCCAAATTGGCAAAACACGCTCTATGTATGAACGTAGGACTTGGA
GTTCAAAACCAAAATGGAGACATCAACGTAGATAAACTCAGAGAATCTATTGAGAAATTTACTGATAACAAA
GAAAAAGTTGACGAAGTTGTTAATAAATGTGGCACCAGAACTTCTACGAACGCTGAAGAAGCTGCTGTTGG
TTTGTGAGATTGTATCATGAGCTTCAGACCTCCCTCACCTCAAGGCGAACATCATGGTCATCATCACTAG

>DrybOBP3

MHFSVFALFFVFAVVSAEISNEPEESFKKIHDQCQLDPASQVNEAIFDKIRHGEKVTDPKLAKHALCMNVGLGV
QNQNGDINVDKLRRESIEKFTDNKEKVDEVVNKCGTRTSTNAEEAAVGLSDCIMSFRPPSPQGEHHGHHH

>OR797800 DrybOBP4 odorant binding protein 4, complete cds [Diorhabda rybakowi Weise]

ATGAAGATTGTACTCGTATTTTGTGTGCTCTTGTTTCTGTTTGGCACGTGGTTTGCCAAACCTTCAGAAC
ACGAACGCATAAACTAGCTGAAGTCCACCGGTCTTGTCATCCAATCCAAAACATTCTGCGACGAAAACA
AATTGAAGAATCTTTTCAATAACATCAATGACCCTCAAGTCGGCACTCACATGCTGTGTATGGCAGTCAAAGC
AGGATTGATGAGACCAAATGGGGATTTCGATATTTCTATTTGAAGCAGAAAGTTAGTTTGGTAGTACGCGA
TCATTCTAAAGCAGAGGAACTTGTTTCAAGAGTGTACTCGTAAAGGAGAAAACCCAGGAAAAACTGCCAATT
TGATGTGGAAATGTTTGGTTGAAAATGATGTTTCAGTATTATCATCAGTTGTAA

>DrybOBP4

MKIVLVFLCALVSVLARGLPNLPEHERIKLAEVHRSCQSNPKTFCDENKLNLFNNINDPQVGTHMLCMAVKA
GLMRPNGDFDISYLKQKVSLVVRDHSKAEELVQKCTRKGENPGKTANLMWKCLVENDVQYYHQL

>OR797788 DrybOBP5 odorant binding protein 5, complete cds [Diorhabda rybakowi Weise]

ATGAAAATCGCAACAGTGATATGGTCTTCGCAATTTTGAATGGTATCAGCAGTAGCACCACTGGCCGAT
TCAAAGTAGCATGATAAATGCCAATCTGATCCAGCATCGTACGTCGATGAATCGATTCTAGAGAAAGTAAG

ACGTGGCGAAAAAGTTACTGATCCCAATCTGGCGAAACATACTCTTTGTATGAACGTGAAAACTGGTGTTCAGAGCCAAAATGGAGACATAATCGTGAAAAATCTCAAAAAATTCCTCGAGAGTGCAGGAAATAGTAAAGAGAAAGTGGACGAAGCTATCAGCAAATGTGGTACCAGGGCTCCGCTAACGCAGATGAAGCTGCCGTAGCTTTGACAAACTGTGTTATAAAATTTAGACCAGAACGCCCTCATCATCAT

>DrybOBP5

MKIATVIWFFAIFAMVSAVAPPGRFKVAHDKCQSDPASVDESILEKVRRGEKVTDPNLAKHTLCMNVKTGVO SQNGDIIVENLKKFLESAGNSKEKVDEAISKCGTRASANADEAAVALTNCVIKFRPERPHHH

>OR797789 DrybOBP6 odorant binding protein 6, complete cds [Diorhabda rybakowi Weise]

ATGAAAATCGCAACAGTGATATGGTTCTTCGCAATTTTGGCAATGGTTGTGCTGATGATTACATATTATTCTACTCAAAAACAATTCGCAAGTTCTATACAATGCAACATATTATGAAAGATATTAATCTAATAAAAGCTAAAACTGACACACCATCCAATGTAGATCAATTAGCAAGCAGATTACTGTGTATGAATCAAAAGCTTGGAATGCAAAACGACACAGGGTGACTACGTTCCAGCGGAAATCAGAAATTATTTGAACATGTAGTTGTCAACAAAGATAACATTGAAAAATTGTGAATCACTGTTCACTGTTAAATCTGATGGAACACAGCTAAAGAAGCTGCTCTGAATTTATTGATTGTGCCAAGAAGATAGATTCTTTACGATTATCCTCT

>DrybOBP6

MKIATVIWFFAIFAMVCADDYILFYKQFASSIQCNIFMKDINLIKAKTDTPSNVDQLASRLLCMNQKLGMQNE QGDYVPAEIRNYFEHVVVNKNIEKIVNHCSVKSDGTTAKEAALNLFDCAKKIDSLRLSS

>OR797790 DrybOBP7 odorant binding protein 7, complete cds [Diorhabda rybakowi Weise]

ATGAACAAACTATTTCTATTCGCAGTACTCTGCATCGGTGTTGCCAACAGCGAATTGGCTGAATCGGAGTATGTACCGAACTGCTTAAGTTGGCAAAAAGAGACTCACGATAAGTGTATTGAGCAAACCTGGTGTGACACAAGCGCAATGAATGAAGTGAACAAAGGTAAATTTGATGATGATGAAAAAATGAAGGAATACATCACCTGTCTGTGGGTACAGGGCAAAGGGCTGAATGAAAAATTTGAGCTCAATACGGAATTAATAAGAAATGTGTTACCAGAGAAATCAAGACGTGGAATTGAAAGTTATGATGGAGTGCCATGACGAAATACAAGCAAAAGCTGGAGCCGATCCAGGTTCTAGATAAGACGTACTCACTCGCCAAATGTGTCTACAATAAGAAGCCAGAGGTGAGTAATTTTGAGTCTTCATTCATTTGCGCAACAAAGCCTTCACTACCATTTTTCTTTCAACGCCAATATAATTATTAAAT

>DrybOBP7

MNKLFLFAVLCIGVANSELAESEYGTLLKLAKETHDKCIEQTVTQAAMNEVKQKGFDDDEKMKEYITCLWVQ GKGLNEKFELNTELIRNVLPKIKDVELKVMMECHDEIQAKAGADPRFVDKTYSLAKCVYNKKPEVSNFGVFIHF ANKAFTTIFSFNANIIK

>OR797791 DrybOBP8 odorant binding protein 8, complete cds [Diorhabda rybakowi Weise]

ATGATGTGTCTAAGAATAGTATTGTGTGTTTGTCTGGCTATAAGTAACGCTAAGCCTATTTGCGATGACTTACAAAAGATGCAAAAGAGTCACGAAGAATGTATAAAAGAAGTTGGAATAGAAAAAGTCGATTTGGATAAAGTTT TAGAATCGAATTTGCTGAAAGAACGTTGGAAAAATACTCTTATTGCTACGGTAAAAAATTCGGATACATCGGGCAGATAATAAAATCGATAGAATTATTGCTAAAGACCAATTCGAAAAATCATCCCTGGAACATCTGAGGAATTATGAAAGTGTGCATACCCGAAGGAGAGGTAAGTAAAAAGTAGCCTTGGAATACAACGGTGTATCGGTCAAAAAACTAAAGAGTTATCAAAACAAT

>DrybOBP8

MMCLRIVLCVCLAISNAKPISDDLQKMQKSHEECIKVGVLDKVLNLPERTLEKYSYCYGKKFGYIGADN KIDRIIAKDQFEKIIPGTSEEFMKVCIPEGEVTEKVALGIQRCIGQKTKELSKQ

>OR797792 DrybOBP9 odorant binding protein 9, complete cds [Diorhabda rybakowi Weise]

ATGAAAGAAGTTTTCTGATTTCTATGTCTAGTATCGTGATTTGGGGTATGCGGTTGCCACCATCAGAGATAAAGAATTGAACAAAGTTCATCACGAATGTTTGATTAAACTAAATGTGATAGAAAATACGTTGCTCATCGTTATGAATACCTTGTTACGAACCTTTGAGAGAATATTTGTTATGTCTTGCAACACGTTATGGTTTGATGTATCCCTCTGGAGATTTCAACTACGAAACATTGGAATATAAATTTCTGATAATTTGCGAGAAGGGAGAAGATCCTGAATAT

TTTATAAAAAGATGTGCTCGACCTTCTTCTATTTCCGATGCTCGTCAAATAGCAGTTGACTTTTGGACGTGCTT
AGAACAAATAAATTTTCATTATTTGAGTTTATTAATATA

>DrybOBP9

MKEVVFVFLCLVSCIWGMRLPPSEIKELNKHVHHECLIKTCDRKYVAHRYEYLGYEPLREYLLCLATRYGLMYPSPGD
FNYETLEYKFLICEKGEDPEYFIKRCARPSSISDARQIAVDFTWCLEQINFHYLSFINI

>OR797801 DrybOBP10 odorant binding protein 10, complete cds [Diorhabda rybakowi Weise]

ATGAATCAAAGTTACTTTGTATTTATCTCTTGGTCATCATAGCAAGTATCGTACTAGAAGGAAATTGCGCTCC
TTCGGACAACGCTAATGCTACTGTCAAAGATTTTGTATTAAGGAAACGGGTATTAGTGAAGATAAAGTGAA
GCAATGGAAGATGAATCTGTAGAAGAATTAGACGAAGATTGTTACTGTTACCTTCATTGTATCTTCATATCTC
TCAAGTTAATTGACGAAAAAGGTAACTTGATGTGATGGAACTATGAAGGAATTCCTGATTTAACAAAG
AATGTTTAGAAAAAGTTCCTCATATTTGGAGTGACTGATATAGCAGCCCTCGATAATTGCGAGTCC

>DrybOBP10

MNQSYVFYLLVIIASIVLEGNCAPSDNANATVKDFCIKETGISEDVKVQMEDESVEELDEDCYCYLHCIFISLKLID
EKGKLDVMETMKEFPDFNKECLEKVPHILECTDIAALDNCE

>OR797793 DrybOBP11 odorant binding protein 11, complete cds [Diorhabda rybakowi Weise]

ATGTTGGCCAACGATTGGAAGAACTTTACATCAATTCTCACTTCGTAAACATAAGAAATAGGAGAGATACTT
CGAATGAAATCGAAGGCAAATGTGCGAAAAAAGGAAGCAAACCTTGTTGTGATGACACGTCTTTGAAAA
GATACACAAAGAACAAAGAGATTACAAGGAAGCATGCTTTAAAGAGATAGTAGGAGAAGATAAGCCGGAA
AAACGTCCACATGAAGCACCATTGATCCTTTCGACTGCGAAAAAATGCGACAAAGAAGAAAGTGAGATTGT
GTGCATTTCTCAATGTGTGGGTCAAAGAATAACTATATTGACGATGACGGTAAGATTAAACCTGATGAATTT
GGAGAATACATAAGAGATCTATTGGAAGATATCACGTATTTAACTCCTGTAGTAGAGAAGATAATTGAAGGAT
GTTTGACCGATATCAAAAATGCTACGATTAAATATGATAAATGTAAACAAGATGGAATGATATCAGAATTTGT
ATATTTAAAAATATTCAACTGAATTGTCCCGATGATCAAATGAAGAATAAAGAAGCTTGTAAGAAGTTTCAA
AAATGTTAACAGAAGGTCCACCTGCACTACGTGGCCTACCACCACCAGGTTTGTGAGACCACCACCATCTC
ATTTCTTGATTAG

>DrybOBP11

MLANDLEELYINSHFVNIRNRDTSNEIEGKCAKKGSKPCCDDTSLKKIHKEQRDYKEACFKEIVGEDKPEKRPHE
APFDPFDCEKMRQRREIVCISQCVGQKNNYIDDDGKIKPDEFGEYIRDLEDITYLTPVVEKIIIEGCLTDIKNATIK
YDKCKQDGMISEFCIFKNIQLNCPDDQMKNKEACKKFQKMLTEGPPALRGLPPPFGDGPSPSHFLD

Phylogenetic tree of Coleopteran OBP sequences

>AUF72964.1 AchiOBP17 odorant-binding protein 17 [Anoplophora chinensis]

MKTALVLLSVIAGTLAASLSEEEKKLQEIHDRCAQADPATYVDHELLHHLADNIDNPKVGAHMLCESKAVGLQKP
NGELDLNVIKQKISLTVSDKAKVERLVRECAVKKQTPEKTAVNLFMCLDKDGVTFHEF

>AUF72969.1 AchiOBP22 odorant-binding protein22 [Anoplophora chinensis]

MFPSVVCVVGSYLIFLTIIQAKEISSGRCDIPPSAPKKVEEIIINQCQDEIKLAILSEALQAFNVNEHSRSRAKRATFSE
DEKRIAGCLLQCVYRKMDAVNEKGFPVQGLVSLYTEGISQKDYILATVQAVNTCLIQSQKKYLITPQSIDENGKT
CDIAYDVFDVCSDEIGKYCGQTP

>AUF72949.1 AchiOBP2 odorant-binding protein2 [Anoplophora chinensis]

MKTLFVFLCVAILGAVAHHLPETEMRKLKEVHDSCQANPTTHVDEKLLKKLKENVEDKKVGTHLLCMAVKVGLL
TQDGDLIKNVIRDKIVIATHDSLKVDEVLLKCAVKRETPEKTAVQMLVCFIDNGIHYHDL

>AUF72985.1 AchiOBP38 odorant-binding protein 38 [Anoplophora chinensis]

MKTVFVFLCVIVGILAQDKPKLIAEEQMLEHIHDECQADPKTFADHDLHNLAAANIDNPQVGAHMLCESTKVG
LQKENGELDIETIKSIGLSVADPNRVEFLVKECAVKKNTPEKTAINLFMCLDKNGVTFHEF

>AUF72972.1 AchiOBP25 odorant-binding protein 25 [Anoplophora chinensis]

MRTCAIVVCIATLVVSIHCASEEQHERVKKIHSECQADPKTHADDELLKKYHNGEEVDKSIVGAHMLCMSTKFG
VIHEDGKINKSALKTALSRLISDETKLNEAIEKCAVEKDDEPKDTALALGRCFRQQGGTLGHEHIHNR

>[AUF72950.1 AchiOBP3 odorant-binding protein 3 \[Anoplophora chinensis\]](#)

MNNVVAFCALLVATVSAYNFEDPDFNILLSDDLEELSSGVASFHPSRRDDEAVNDKDKCHHRKRWGELCCAE
DVVAKMRDVEKDLKRECFKEVVGDKDKHDFPNCETMDQRKKQIVCVIECVGKKKDLLDTEGNPKKEEFRSF
LKESFSSESWLAALQDKVISTCLDEGKNATANRDASDSTSCNPAGIKIAHCLHREIQLNCPADQIKDEKSCARLQE
RLKRRDFFHPPPPPGGFDEPDN

>[ATL75740.1 AglaOBP2 odorant-binding protein 2 \[Anoplophora glabripennis\]](#)

MKAFAVVLCAVFAVALAQLPDSERIHLKQVHDSCQADPKTYADESRLKQLNKYIDDNVVGTHMLCMSRKAGL
QKANGDLDAVIRQKIDLVADKSKVDGLVKKCAVVDGNPKRTANLLWLFCVQNNIDYLHRL

>[XP_018577241.1 AglaOBP70 general odorant-binding protein 70 \[Anoplophora glabripennis\]](#)

MFPSVVCAVGSYLIFLTIIQAKEISSGRCDIPPSAPKKVEIINQCQDEIKLAILSEALQAFNVNEHSRSRAKRATFSE
DEKRIAGCLLCQVYRKMDAVNEKGFTVQGLVSLYTEGISQKDYILATVQAVNTCLIKSQKKYLITPQSIDENGKT
CDIAYDVDFCVSDEIGKYCGQRP

>[ALR72513.1 CbowOBP25 odorant binding protein 25 \[Colaphellus bowringi\]](#)

MYYALLPRSAVLAVIIVVAAYNFEDTEFNQILANDLEDVYSFTYSHPSRRDDKAVEEDKCHPPRRGRPLCCAE
TMRKLHDDKKEIKRACFEITGKEKPERPDRHHGPPDFPFCEKIEQHRRDMMCIQQCVGEKLDYLDADGKPK
PEQFEKYVEGIFEKEDYLLPLKDKIVSVCLDEAKNATEKVSSDPCKSTGLVLEHCIFINTQLNCPEDQIKDKKMSCK
FQDRLRQGFDKRSSPSPEAEDE

>[XP_044748578.1 CsepOBP19d general odorant-binding protein 19d-like \[Coccinella septempunctata\]](#)

MFKFVVLTCFAVAVNAVSEELKGKFLEKMTKIGGECAKEVGANEDDIAELMAHKLPSRHEGECMIFCFHKHLG
LMNEDGTLNKEGAMKAAEPLKADDPHELHEKVVKIGKECAEEVAADDDCKKYATKLTECVVKKGKAMGLDSSVL
H

>[ALR72502.1 CbowOBP14 odorant binding protein 14 \[Colaphellus bowringi\]](#)

MSTTMKLAVFLFVVFSSVMEGYSAPSDSSNSTIKDYCIKEVEISEEKVNKFEKNPDDTPDEDIMCYTHCILVTLGV
VDDDGKIIIEFTKIFDKYDMCEVKKIPKILECTDLINLNKCAATDE

>[AIX97067.1 DhelOBP21 odorant-binding protein 21 \[Dastarcus helophoroides\]](#)

MKSFAFVLALTFFVAVYGLTEEQKEKIKAYHKDCSASSGVNQDLITKARKGEFVEDPKLMEHLFCFSKKAGFQNE
AGDIQTDVIKAKLGAIEKDSATVDQLIKCAIKKATPQKTAFDTIKCYESTPQHISLA

>[AQY18970.1 GdauOBP6 odorant-binding protein 6 \[Galeruca daurica\]](#)

MTEKQMNATKKLVRNSCTAKTKVAPDVVDAMHKGDFSNGQCYLIMNTYKLIRADGSFDWEGGIATVNAN
APPHIAATAAASIKNCKDSMKNTSDKCLGSAEIAMCIYNDDPPNYFFP

>[AQY18965.1 GdauOBP1 odorant-binding protein 1 \[Galeruca daurica\]](#)

MYTLWMISVITMFAITVSASEFDDMRDRIMETKEYKECSQESGATYDDFMAFKNTTEVMCLFKCSLEKKGSLD
KDGNIIDLNIKERLSGNTHLDDTKEMFLKCAESVGKIDKCDDLLEFRWCLVNITKKQ

>[AQY18986.1 GdauOBP22 odorant-binding protein 22 \[Galeruca daurica\]](#)

MYFHAFVFLFVAVISAEALSQLPGRFNKAHDKCQSDPASYVDEAILEKVRGEKVTAPNLAHTLCMNVESGVQ
DQNGEIIVENLRKFLERAGNTKEKVDEAISKCGTRTSAIAEEAAVALTNCVIKFRPERRHNR

>[AQY18972.1 GdauOBP8 odorant-binding protein 8 \[Galeruca daurica\]](#)

MAKLLTLITIGVMCLSPSFAQKEDFIACLQESGLDISEVKNLNTKDLSCFIKCTMTKTGEIDSEGNVNMDKINLN
LDKMKLTETIKDSLKTCFAGIEKIEKCEDAQKVTKCWSGVFNDTKWFDEQ

>[AQY18988.1 GdauOBP24 odorant-binding protein 24 \[Galeruca daurica\]](#)

MKSVIMFIIICFSFVLEIFAETRTAPNLEYQEARRKCQDDPKTTLDRETLKNAFRGDINTALFGGHAVCIYRHLGILD

EQANINKIKLRDSDYIIVDQRQLDAAVKECSVKKNTPEETAIVEIFKCTKRAMAPYLPHYEP

>[AQY18979.1 GdauOBP15 odorant-binding protein 15 \[Galeruca daurica\]](#)

MNKPIIFAVLCIGVASCFVPETEFGIKLLKLGKEAHEKCIETGVTQAAIERAKQGKFDDDDIQIKDYNNCLWTFSK
AINKNFEINVELIKELLPKIRDVQLKAIMDCHEEIKGPILSLEKTYLLSACVFNKNPENWIYF

>[AQY18974.1 GdauOBP10 odorant-binding protein 10 \[Galeruca daurica\]](#)

MSSMKYIFLSLCLFFIYENVQTLMTKQIAATKKLIRNTCINKQGVAPKVDGMYKGEFDFSDKNSMCYVHCVLT
TYKLIKDNFTDWEEGISVMQLNAPPSIATPVIETIKNCKNAVKTTHHKCTAALEIAKCLYDDDPVHYFLP

>[AQY18989.1 GdauOBP25 odorant-binding protein 25 \[Galeruca daurica\]](#)

MKTVFVFLCVLVAVLARGLPNLPENERIKLAEVHRSCQSNPKTFCDENKLNLFNNINDPQVGTHMLCMAVKA
GLMRPNGDFDIPYLKQKVGLVVRDHSKVDGLIQKCTHKAENSGKTANLMWKCLVENDVQYYHQL

>[XP_045479958.1 HaxyOBP19d general odorant-binding protein 19d-like \[Harmonia axyridis\]](#)

MFKFLFLVACALVAVNAVSEQLKNEFIEKMTNIGGQCAKEVGANEEDIAELLAHKAPSRHEGECMIFCFHKHLG
LMNEDGTFSKEGGLKALEPVKADDPKLYEKLISIGKMCQEVAKDDDKCKYATQLTVCGVKKGKEMGLDASMI
H

>[QTE76124.1 HaxyOBP16 odorant binding protein 16 \[Harmonia axyridis\]](#)

MNKVVLFGVLVATALCAVAAYEFASDDFNEYLADELDDYSTMDVPIPKLRFRRDEEAVSDKCRYRRKRLCCAETSIE
ELHEKEKEIKRECFKQVLGKEKEHRMDPFKCNIEKHKRDMICVMQCVGQKNDVLDADGDVRDAEFADFVKQ
SFSKDPWFAEFQDTIETCIDEAKNATEIRDTEKSAKNPAGIKLAHCLFVQTQLNCPSEIKDTKSCSKLKERIKAK
LSDGVPPPPFLHEE

>[AEA76516.1 HparOBP2 odorant-binding protein 2 \[Holotrichia parallela\]](#)

MKYFVLFALCTYVLGATLQEHQVVMQEIINAGAECAEKLGATPEDVDKLMKEQIPDNKAGLCVVACVNKKF
GLQNDGTVNKGSTLVNIEKVKDIDEDMYKKMSSVWSTCNENTGNDSECNNTGINLLKCMKEEGGKLGLTKE
SMGF

>[AKI84378.1 HparOBP20 OBP20 \[Holotrichia parallela\]](#)

MKFFVLLSFVAFANCMDQDFTLKATARMSQYVEECAESTGATKDDLAEVMEIRIPSSKEGKCFACVYHKKYGIQ
DKDGKLDKEASIEAMSDLKIADPELYDKAVKLFDTICINQVPNQDCECNTAAIFMYCFNNGGMMGLKPGMVP
M

>[AKI84360.1 HparOBP49 OBP49 \[Holotrichia parallela\]](#)

MKISLFCFALCVAIVNASIEKYIDQLTTEIATAKTECAKQVGASVDDVVEVFQKTPTSKEGKCIISCVLKLFGGQDS
NGKINKHAAIGKIEELPIDTDVYEKFSSVWKSCEKTSDDNDGCDAAKLMICLAQEVDKHGISKKLIGL

>[ADF87391.1 HparOBP49 pheromone binding protein 1, partial \[Holotrichia parallela\]](#)

MFKNTALLILGTFLPTVLCLSEEMEALAKQLHDDCVAQTSVDGAHITTVKDQKGFDDDEKFCYLKCLMTETAIV
GDDGVVDVEAAVGVIPDEFKDIAEPIMRKCGVIPGANPCDNVYQTHKCYEMDPKSYMIV

>[HparOBP14 OBP14 \[Holotrichia parallela\]](#)

MKFVIVLLLSALAFINAYDFEDHAYNELLVEQYSLAHPRLRRAAENNCIDSRSCCYNDVAVPQYHANETEECSKELG
FDRSQIRGPLTDAQINQIKCLAECISKKKGHFDADGNLLKDELLKDIRKPLEQVAWLKPKVEDIFNKCLDGLPTKV
PENQCNDIGMTIGHCIWKEIQLECPKDRQANLEKCEALQVYLKENKAFPPPPPIRC

>[XP_023018007.1 LdecOBP70-X2 general odorant-binding protein 70 isoform X2 \[Leptinotarsa decemlineata\]](#)

MIASELILEFLLILAVKLYNGCDIQALAAINMNEHTHSRAKRAAFTDDEKRIAGCLLQCVYRKMNAVNNGEGFPTV
DGLVSLYTEGISQKDYILATMQAVNHCVNHAQKKHLITPQSISEHGKTCDIAYDVFDVSDDIGKYCGQTP

>[AIX97039.1 MaltOBP24 odorant-binding protein 24 \[Monochamus alternatus\]](#)

MSQVREGEKDLKRECFKEVVGKDKHEKFDPFNCETMDQRKKQISCVIQCQVGQKDLLDSEGNPKKEEFRAVVK
ERFASWSLAAALQDKVISACLDEAKNATANHSDASASCNPAGIKIAHCLHREIQLNCPADQIKDEKSCARLQER

LKRRDFFHPPPPGAFDEPDN

>[AIX97023.1 MaltOBP8 odorant-binding protein 8 \[Monochamus alternatus\]](#)

MKILVTFVCVSIACVLVYGAPSI RDVHNECQADPATHIEDAVFKAIHDGESFDKVKVGAHMLCMATKSGIINQD
GTINKSAVKELLAVDISDETKLVEVTNKCAEEGPTSETALKLSKCITENTKRGRHGHGHHHGHHEHHHDHSV
H

>[AHA39267.1 MaltOBP2 odorant-binding protein 2 \[Monochamus alternatus\]](#)

MKAVLVLCVVVAGALAQLPDSERIHLKQVHDSCQADRATYADESRKQLNKYIDDAVVGNHMLCMSKKAGLQ
KNGDLDIGVIKQKIALVTADKSKVDGLVKKCAVVNGNPQKTANLLWLCFVQNNIDYLHRL

>[AIX97019.1 MaltOBP25 odorant-binding protein 25 \[Monochamus alternatus\]](#)

MFLRVVVCVGSLLVFLVIVQAKDAPSGRCDIPPSAPKKVEDIINQCQDEIKLAILSEALQAFNVNEHTRSRAKRAT
FSEDEKRIAGCLLQCVYRKMNAVNEKGFPTVEGLVSLYTQGISQKDYILATIQA VNTCLFKSQRKYLITPQSIDENG
KTCDIAYDVFDVCVSDEIGKYCGQTP

>[AIX97024.1 MaltOBP9 odorant-binding protein 9 \[Monochamus alternatus\]](#)

MRTCAIVVCFATLVVSIQGLTDEEKGRITVHSECQADPKTQIDDELLKYYKGEHVDKSVIGPHMLCMATKFGT
VNAEGKLDKSKLRQGLSRLISDETKLNEAVDKCSVDKDDAQDTALAVERCVREQAGIAGHVHHHH

>[AIX97020.1 MaltOBP5 odorant-binding protein 5 \[Monochamus alternatus\]](#)

MMKLGFI LSCVIFGALAASLSEEEKLQEIHDKCQADPATYVDHELLHHLAENIDNPKVGAHMLCESKAVGLQK
QNGELDLNVIKQKISLTVSDKVKVERLVKECAVKKETPEKTAVNLFMCLDKDGVTFHEF

>[APC94280.1 PaenOBP26 odorant-binding protein 26 \[Pyrrhalta aenescens\]](#)

MKILALICFLGIFLSVYGDSHFLFMAKYAKYYSDCSEPALNRDDFKNAMSGKPFNAEQAAFFCLNTKFGVQ
NEQGDYVREPLKFFKHIVVNQDNIEKIVEICSTRPGGSSAKDAALSLFNCAKKIDNLHFPFQHTIEA

>[APC94281.1 PaenOBP5 odorant-binding protein 5 \[Pyrrhalta aenescens\]](#)

MKTLALVCFSAIVLPVYADSYFSFYANYITYYMLCDNDAATSLNRDDLRLNALRDKPFNAKQLEAYLFCLNKHFGV
QNEQGDYVPEKLKEFFKHVVVNQDNLEKIVHSCSTRPEGSSAKDAALLNCAKKFDTLNIPLNSETSE

>[APC94279.1 PaenOBP4 odorant-binding protein 4, partial \[Pyrrhalta aenescens\]](#)

RGLVQILKRLTMHFSVFLFFVFAVASAQINPEQRESFKKIHDKCQSDPATHVDDAVFDKIRRGKEVTEPNLAKHT
LCMNVGSGIQNENG DINIEKLRTL LANGPGNKEKVDEIIGKCGTRSSTNAVEAAEALSNCLRQYRPDRPEGDHH
DHHHDHDDHHHH

>[APC94285.1 PaenOBP29 odorant-binding protein 29 \[Pyrrhalta aenescens\]](#)

MIKFSILVTIAAICVCTSM AQKGSFVACLQESGLPEDFSKFGSPDSKEVNC FVKCMMTKMGEIDEEGNVLMDKI
EENLANIKIPDTAKDNLRKCLSAIDKIGKCEDSKKVTECWTS LFK

>[APC94277.1 PaenOBP2 odorant-binding protein 2 \[Pyrrhalta aenescens\]](#)

MKTIFVLTCIVAVALAKNLPNLPENERVKLAQVHQSCQSDPKTYCDESKLRNLVNNIDDPVVGTHMMCMMAVK
AGLMSKNGDFDLGTMKNKISLVINDQSKVDGLVKKCSHKTDNLGKTANLMWVCFVQNDIQYYHKL

>[APC94283.1 PaenOBP7 odorant-binding protein 7, partial \[Pyrrhalta aenescens\]](#)

RVLTLIIPNTNKFTMKITLVFSLLAVTLAGNRREEIKEAVTACGGENDGPNELGKQILKENADQAKLGAITFCVHK
KLGIQNDHGDIDVDVIRKDLNALIKDESEVNKIVEECGRNGDTPEAAAFNFFKCYQKHVTK

>[APC94274.1 PaenOBP8 odorant-binding protein 8 \[Pyrrhalta aenescens\]](#)

MKVIVFCLMLFTFALANETKELIEGSLKSCGAIDGPNAIRTLVVQENADEKKLGAILFCANKKIGLQYADGNINL
DVLERLIEAGNNDEETAKKYMDCGRLKGENGEEKAFNFLKCHETI

>[APC94266.1 PaenOBP23 odorant-binding protein 23 \[Pyrrhalta aenescens\]](#)

MKFVLLAVLCIGSISCFKESEHNEKFQKASKEVHRICMEETGITQEIDNVKKGNFDDDSKTKKYNNCLWTRIKV
MNEKFELDEKLLKDLLPERIRDVQLKFIIECLEETRAAAADLESVEKTYLLTKCIYNKKPENWFYI

>[APC94265.1 PaenOBP31 odorant-binding protein 31 \[Pyrrhalta aenescens\]](#)

MKAAIILALCLAIHCLVDVEELGEEFVEKAKHLHDVCVAQTQVPNSVINLYKAGIFPVQNNLLKKYLTCLWLSEK
GANRNLEFNDEVIKNFFPASIAAHLVPIYVGCALVKQSAPMSTPIDDKFYLISNCIYFKDPENWVFF
>[APC94264.1 PaenOBP22 odorant-binding protein 22 \[Pyrrhalta aenescens\]](#)
MKTALIFTLCLAAAQCIDLKELGDEFVQKTKKLHDLCVAKINVTDSIEQFKAGVYSVQNKLFKEYVACLWLESKA
VDENLNVNEEVKNFLPPSKTVHLAPVYVACIKLVKKTVPANAPVEEKFFLISNCVYFRNPEDWIFF
>[APC94273.1 PaenOBP10 odorant-binding protein 10, partial \[Pyrrhalta aenescens\]](#)
PGVLQLSRIKKHLTMMSSYSIVMCVVLALSTALPSPDDSSQKRMQESHEECLKENGIEEIALSKVLEAKVSEEAL
NYSYCYGKKYGYIGKDNKIDRDIKQVFEAMIPGSSEEFMKTICIPDGEVTKKIALEINRCIDRWKELKKN
>[APC94276.1 PaenOBP1 odorant-binding protein 1 \[Pyrrhalta aenescens\]](#)
MKTVFVFLCVLVAALAHGLPNLPENERIKLAQVHRSCQSNPKTFCDENKLRNLSNYINDIEVGTHMLCMAVKA
GLMTPNGDFDIPSIKRKVALVTRDHSNVDGLVQKCTRKAKEKPGKTANLMWMCFFQNDIQYYHQL
>[APC94282.1 PaenOBP6 odorant-binding protein 6 \[Pyrrhalta aenescens\]](#)
MKIFFIVSLIAATLANEYIEKLETAACECGIGVGELRALEAKGEKTTIGPTLFCMNKKIGIQDSNGIVHAEGVAN
HIRKTHAEKDESEQNKIENC DKPTGDSGADKAYNLFLCVIKNLH
>[XP_031344875.1 PpyrOBPP70 general odorant-binding protein 70 \[Photinus pyralis\]](#)
MYMLRLFSIIVLTVIGVHAKDLKCQVPIAAPKNIEKVNVQCQEEIKTALLSEAFHFLTDNQSVNSSRRKRETFTEE
ERRIAGCLLCVYRKMKAVNSNGFPTAEGIALYTEGAQDQEYLLASHQAVSQCLVDAQKKHLPTPHSITIKGKT
CDIAFDVDFDCVSDRIGEYCGQSL
>[APC94202.1 PmacOBP4 odorant-binding protein 4 \[Pyrrhalta maculicollis\]](#)
MHCFHKYLRIFVDEIRIVIKARACIIFVLVQILKRFTMHFSVFLFFVFAVASAEITPEQQAQEQFKIHKCQSDPAT
HVDDAVFDKLRGEKVTEPNLAKHTLCMNVGSGIQSENGDINIEKLRTILERPANKAKVDEIIGKCGTRSSTNA
EEAAEALANCVRQYRPERPEGDHHGPHDHHHHH
>[APC94203.1 PmacOBP31 odorant-binding protein 31 \[Pyrrhalta maculicollis\]](#)
MFCGSIIFISVCAIIVLGAESKQNTYTNKCEIPASAPRKVEEFINQCQDEIKLAILSEALQTLNANENAHSAKRAAF
TDDEKRIAGCLLCVYRKMKAVNEHGFPTEGLVSLYTNIEQKEYIRATIESVNTCMKMAEQKYLIKPDSDEN
GKTCDIAYDVFDICISEIGKYCGQTL
>[APC94190.1 PmacOBP29 odorant-binding protein 29, partial \[Pyrrhalta maculicollis\]](#)
KALLKASSAPVTSKKPEYNTHITMMSFSIVLCVVLALSSALPRDDASEKKMQESHEECLKESGIEEIDLRKVLTE
APEEALENYSYCAKKFGFIGEDNKIDRDIKQQLAMVPGSSEEFKECIPEEEVTKKIALEITRCIDSKYKELKKD
>[APC94189.1 PmacOBP10 odorant-binding protein 10, partial \[Pyrrhalta maculicollis\]](#)
IKKHLATMMSYSIVMCVILALTALPSPNNSIKERMQESHEECLKENGIEEIVLSKVLEAKVSEEALENYSYCYGKK
YGYIGKDNKIDRDIKQEFESMVPGASEEFMKTICIPDGEVTKKIALEINRCIDRWKELKKN
>[APC94199.1 PmacOBP1 odorant-binding protein 1 \[Pyrrhalta maculicollis\]](#)
MKTVFVFLCVLVAALAHGLPNLPENERIKLAQVHRSCQSNPKTFCDENKLRNLSNYINDIEAGTHMLCMAVKA
GLMSPNGDFDIPSIKRKVALVTRDYSKVDGLVQKCTRKAKEKPGKTANLMWMCFFQNDIQYYHQL
>[APC94193.1 PmacOBP5 odorant-binding protein 5 \[Pyrrhalta maculicollis\]](#)
MKILSLICFFAVFVSVDYFVCAKYITYYIMCGNDAATSLNRDDLKNALKDKPFNAKQLEGYLFCLNKHIGVQ
NEQGDYVPEQLKEFFKHVVVNQDNLEKIVHSCSTRPIGSSAKDAALSLNCAKKLDTLNFPLNSTLQTDISSI
>[APC94194.1 PmacOBP6 odorant-binding protein 6, partial \[Pyrrhalta maculicollis\]](#)
RELSDISIMKIFFIVSLIAATLANEYIEKLETAACAGLGGELRALEAKGEKTTVGSTLFCINKEIGIQDSNGIVKA
EEVANHIRKTHQDKDVSQNKIENC DKPTGDSGVDKAYNLFLCIKLNH
>[APC94180.1 PmacOBP23 odorant-binding protein 23 \[Pyrrhalta maculicollis\]](#)
MKFILLAAVCIGGVSCIIESEFNEKLQKISKEAHRICVKETGITQEAIDHVKKGNFYDDLKTKKYNNCLWRNTQV
MGENFKLDEKLLMELVPEKARDLLFKGISECFEEARAAPADLDFIEKTYLSKCIHDKSPENWFYF

>[APC94197.1 PmacOBP27 odorant-binding protein 27 \[Pyrrhalta maculicollis\]](#)

MKSLLVCLLIITLAMTDETKDLIEEALISCGAEIEGPNNIGTLVVQENADETKLGTILFCANKKIGLQHDNGEINIDV
LENLMETGNRDEATAKKILDCGRSKGDNGAAKAFNFKCHELAVRP

>[APC94179.1 PmacOBP33 odorant-binding protein 33, partial \[Pyrrhalta maculicollis\]](#)

MKTVIIALFFVAANCAINPAEFSPKLIKLTQELHDTCKSQSNVKDEYIQAHKQGNFAVNDITIKKYIACLWSVSKA
LDEHLVG DYDFLYSVIPPRVSSYLPLYLDCFRQVRLTVPADAPFEEKTFLINTCIYYRNP

>[APC94177.1 PmacOBP22 odorant-binding protein 22 \[Pyrrhalta maculicollis\]](#)

MKTALIFILCLAAAHCIDLKEFGDEFVQKTKKLHDLCAKINVTDSIEIQFKEGVYSVQNKLFKEYIACLWLESKAV
DENLNVHEDVVKNFLPPSKTGHLAPAYVACIKLVKKTVPANTPVEEKFFLISNCVYFRNPEDWIFF

>[APC94187.1 PmacOBP28 odorant-binding protein 28 \[Pyrrhalta maculicollis\]](#)

MKLFISFLIVAIVCCANAELTAEQKEKVKGYHKECIDVTGANPDLVKQAREGKFADDEKLNHILCVSKKIGFQND
AGDIQTDVLKHKLGAAALGDQAVADQLISTCAQPKANPAETAFTLKCYYEKTPTHVSFI

>[APC94196.1 PmacOBP26 odorant-binding protein 26, partial \[Pyrrhalta maculicollis\]](#)

EETPGLNNNSTSTMKTVLIISMILLAVSLAGKRREEIKEAVRSCGGDAGGSDDLKXHTDENVDQAALGAKIFCV
NKKIGLQNDHGNIDESVFRKDLKAVVGDEAKVNEIVAECGKRKGDTPAAAAFNFLKCYEKNVPK

>[APC94195.1 PmacOBP7 odorant-binding protein 7, partial \[Pyrrhalta maculicollis\]](#)

AASNKENTSKFTMKTILVFSLLAATLAGNRREEIKEAVTACGGENDGPNELGKLILNENADQAKLGAITFCVNKK
LGVQNDQGDLDVDVIRKDLNTFIKDESEVNKIVEECGKRKGDTSAAAAFNFFKCYQKHITK

>[APC94198.1 PmacOBP8 odorant-binding protein 8 \[Pyrrhalta maculicollis\]](#)

MKVIVFCLMLSTFALANETKELIEGSLKSCGAEIDGPNAIKRLVVQENADEKKLGAILFCANKKIGLQYADGNINL
DVLRLIEAGNNDDEETAKKYMDCGRLKGETGEEKAFSFLKCHETI

>[XP_030765038.1 SoryOBP70 general odorant-binding protein 70 \[Sitophilus oryzae\]](#)

MTGMGRILIFVFFIYGCAVQDIKKCDIPATAPKKIEEVINTCQDEIKIAILSEALEVLSVNEEKARVKRSTFNPDE
KRLAGCLLQCVYRKLDVAVNENGFPTEEGLVLTYTEGVTTQKEYVTATKQAVQTCLTQVQKLLVTPLSLEESKVCV
AYDVFDVCVSEEVAKYCGQTP

>[QCT83274.1 SzeOBP20 odorant binding protein 20, partial \[Sitophilus zeamais\]](#)

MTGMGRILIFVFFIYGCAVQDIKKCDIPATAPKKIEEVINTCQDEIKIAILSEALEVLSVNEEKARVKRSTFNPDE
KRLAGCLLQCVYRKLDVAVNENGFPTEEGLVALYTEGVTTQKEYVTATKQAVQTCLTQVQKLLVTPLSLEESKVCV
AYDVFDVCVSEEVAKYCGQTP

>[QCT83286.1 SzeaOBP32 odorant binding protein 32, partial \[Sitophilus zeamais\]](#)

MNTLVALCVVVSAAVSAYDFQDVEFNQLLASDLEDGFDLSLPLNSRVRRQAATQSPNEDDKCKKRHRRP
KACCADELDDQIHEKDKELVRSCFREVLGVDKHEHHRRGDPFSCEQAEKRRNEMTCVFQCVGQKKGVVGEDG
KPKPEEITKLTENFATESWFEPSIEKVVSTCLKEAENATATQVKPASADVKICNPSGITLKHCFIREIQLSCPADQIK
DQKACERFQERIKKGIDFFEP PPPPPFDGPRDE

>[SveLOBP4](#)

MHSCQNSYFVVVLFVLNLISVNCQSDQAGGPPGKHPFHAASKEDFQKCLDETGLTIDDLKSLHHDPSKEPTEK
HLCFMKCTATSGGLISKDGTLMTDVIKQNAPPYLDLNTAICLEGVGKISTCSDMSKVFKCFKPPNRPQ

>[SveLOBP15](#)

MVTKSKMCQVYCCIALVFCATSVLAKVDESIFTDDLKKLMDNLHETCVQKTRVSEALIDKVKEADFDVDDRLK
CYVKCVMTESGTMDESGEIDYQALMEVVPDKYKISIKKDFENC SRKADGIDDLCEKAYTILQCVQEIDPDNYYFV

>[EFA07544.1 TcasOBPC01 odorant binding protein \(subfamily minus-C\) C01 \[Tribolium castaneum\]](#)

MKTIICFVFLAGAWALTKEQIDKLEPISKECRELNGISEDITLKVRRGEAVNEPKLKNHVLCVSKKTGLASETGET
NVEVLRTKLRKVSSENDDEVNSIIQKCVVKSTPEETAFAEIFVCLRKVKPNFSPAN

>EFA07546.1 TcasOBPC03 odorant binding protein C03 [Tribolium castaneum]

MKFLVCLLFVIVAANALTKEQKEKLDKISKECKNQSGVSQELIDKARTGELINDPKLKAQIYCVSKKAGLATEAGEI
NMDNLKTKLKKVAANDDEVNKIIQKCVVKKPTPEETAFEVYKCLHANKPNFSVVD

>EFA12066.1 TcasOBP15 odorant binding protein 15 [Tribolium castaneum]

MNCFVIFALSLSATVFGQSLSEDEMRENARKLMTSCKDKVGASDADVEALKMHQMPESEREGFCMLECVFDSA
KIMQDGKFSKSGMIEGFKPLIGDDKAKLESLEKLSATCESELGDGEDKCETAKRLVECVIKNGKTHGF
EVPPPRE

>XP_044268412.1 TmadOBP70 general odorant-binding protein 70 [Tribolium madens]

MCTKVCILILSIIVNAEESKENKCNIPPTAPKKIEDVINKCQDEIKLAILTEALEALSINEHAKSRAKRDTSFSDDEKRI
AGCLLQCVRKMKAVNEKGFTVEGLVALYSEGVVTQKEYIIATLQAVNVCLNKAQKKHLTKPQSLEEHGKTCIDIA
YDVFCVSRIGEYCGQTP

>EFA07430.1 TcasOBPC04 odorant binding protein (subfamily minus-C) C04 [Tribolium castaneum]

MKAFIVLVAVCAQALTDEQKEIKNYHKECSAVSGVSQDVITKARKGEFIEDPKFKEHLFCFSKKAGFQNEAG
DFQEEVIRKKLNAELNDLDATNKLIACAVKKDSPQQTAFETIKCYENTPTHVSLA

>EFA07518.1 TcasOBPC14 odorant binding protein C14 [Tribolium castaneum]

MNIYTCLVLVIAAASQAHLTEEQKNNWRKWSNECKVLIGVSQEAINKIRNNEFDSVDDKIKKHGLCFAKKASLA
DSSGNIINQIKIKLRVIEDDEEVDRIKTCTIRKNTPEETTFETFRCLRENSSKFVPV

>EFA07543.1 TcasOBPC05 odorant binding protein C05 [Tribolium castaneum]

MKFLVVISTVLMANIVQGLTDEQKSLEEYSKECLKESKVDSEVLKEAEKGVYLDLDPKLMNHVYCLVKKINSQKD
KGELEVTQIKEKLMMQINDEKEVDKLIQLCLVQEKSARYSLGKCEVSS

>EFA02860.1 TcasOBP18 odorant binding protein 18 [Tribolium castaneum]

MKLFILAGILFTGVCAVDQEFVEKFLQKMEKIGEECAEETHATSDDIADLIEQRDPKTHEGKCLIFCYHKKFNTMK
EDGSLDKVGSVLALVEVRDADFELYKNILTFVTGDKAKIYDDPCETATALTMCGRDEAKALGLQDAIFG

>EFA02861.1 TcasOBP17 odorant binding protein 17 [Tribolium castaneum]

MKSTWFFLLACSLTCALDQEFVDEFLEKMQEFGAQCAEETDATSDDIAELIARKLPPSTHEGKCMIFCMQKKF
NMMKENGIDRAGAIAALKPLQKADPELHQVKLIFVTGCMRVKPSDPDCDTATELALCGKKEAEAIGLEDALL
T

>AXO78390.1 XquaOBP12 odorant binding protein 12 [Xylotrechus quadripes]

MKSVIVFLCAIVGILAQNRILVEEQMLHHIHDACQANPATYADHDLHLSANLDNPQVGAHMLCESKGVGLQ
KENGQLDPDTIRDKISLTIGDAAQVDRLVKECAIPKNTPEKTAIHLFMCLDRNGVTYFHEF

>AXO78393.1 XquaOBP15 odorant binding protein 15 [Xylotrechus quadripes]

MKPVLVFLCAIVVGITGQNRRIVEEQNLHHIHDACQADPATNADHELLHNLAAANIDNPQVGAHMLCESKGVGL
QKPNGELDPETIRSKLTVFIDDPKVDKLIKECAIQKNTPEKTAIYLFMCMDKEGVTYFHEF

>AXO78394.1 XquaOBP16 odorant binding protein 16 [Xylotrechus quadripes]

MKGLVFIVCVTISVTLASGLTEEQKEKVKIVHKECQDDPATHADENKLSDSYKGVEVTGLGAHFLCMSKKLGMQ
KDNGNVDDREAIRKLSDVITVPEKLQEAVDKCAVQKATPEDTAEHVLCFHDYAGHVLHAHDHHH