

DrybCSP1	...MFES..LIVCVLVIVVVSEARPEI..TYTTYDNIDIDEIHNDFLLRSYVDCIIGT..KPCSKDGEELKKVFREALETFCSKCSEFPQFEASFKIGKYLIENTKRSWFDELVEVFIPD	111
DrybCSP2	...MFLAI.VVVCVSLVIVAVSAAPSIE.KYTSKYDNVNIDDIKSDPILLRNYIDCIGT..KKCTKDGEELKRVLPDALKTKCAKCIDTQFEGAFKILRELLKNNKQWFDELEAYYISD	113
DrybCSP3	..MNEWCIEVVLMVLIVVAAVHCAPKEYDENLKIKKIDIDQVINNDFIIRNYVDCVLGK..KRCINEGNALKESWKGDLKCCDNCIEEDFRKVKILKHIYTFHRDIYDELAHLLKD	116
DrybCSP4	...MGLIRIFVL.....LAIVSCSIAQTYNTRYDNIDIDRIIASKFLLDNYIQCIILEENVKRCSPGEGFEKKYIPEAIQTNCARCSDSQFRIVKKTAKHIITNRPQIWEKIFQKFIPO	110
DrybCSP5	MQIFQFGVIFLIHIVSIITVAAAVTEKSTTIRPSISDEAIEASIKDKFYLRQLKCAIGE..APCLAVGFRLLKSIAPLVLQGSCSQCIIPQECQQIFKVLAYMQVNFPEWNNKIIRQYSG.	117
DrybCSP6	..MVELICILVAGISGLVDSAFVSDQNQCYYTTYKYDHVDIEMIKNRFLIFYTACMLNK..GPCSEPEGIEFKKIIPDAIRTNCKRCIDKQFVTTVRAIQGLMKEYEKIWEQLFTEWIPD	116
Consensus		
		C1 C2 C3 C4
DrybCSP1	ESKLELYRENKAEGLI.....	129
DrybCSP2	EVYLFSEYEFELKEEGIEV.....	131
DrybCSP3	GKYREKYQAQIDEILKDCTL.....	136
DrybCSP4	GTYHCSENN.FLNSE.....	124
DrybCSP5	.....	117
DrybCSP6	LIYVFKLETHGNVPNPNIILNRFDGGEESIDTSIESSSITSTFSPYNTPPVIFSGIVFTLNPETIPIANAIGQSIKATIIYGISQFCHTFKVSILVLLHQITSTVTEASVKFFIR	231
Consensus		

Figure S3. Sequences alignment of CSPs in *D. rybakowi*. The location information of conserved cysteine of different types of OBP is identified by red colors.