

CeACB6 .....MAYVEEGSSNEKKKKKNT.....MFLVYVCSIDILMGTGAGTNGANGLCHLGRITTSK.....AGHNVLSVRILT 85  
Dendrobium\_chrysotoxum .....MASIKEDRGARKVEE...KSSSPFRLHGLASGIDILMTGTAGTNGAVMLCHLGRITTSK.....AGVNVVHVRKILT 82  
Phalaenopsis\_equestris .....MGVEEDENRAAKEETNNH.YGMLHLSIAGSDITLMTGTAGTNGAVMLCHLGRITTSK.....AGVNSALLHVSILT 84  
Dendrobium\_catenatum NMNISYSGKDNMRNQSAAELANGSRFINRMFCIQILRKEA.....SIEGEGARKKEE...KSSSPFRLHGLASGIDILMTGTAGTNGAVMLCHLGRITTSK.....AGVNVVHVRKILT 126  
Vanilla planifolia .....MVTTGTEVKDSISFAEVMAGENGHRDNLTYNGESINSESVTKASRVCHENGKKKKYTPGRLPAFASGIDILMTGTAGTNGALMLTNTVGLNLTGSGASRHHVHVRKVA 125  
Apostasia\_shenzhenica .....MEHKDNISFSEVTTGNGRGLGPFNTTASSSSSSVVGEGKRG.DGGRKDCNCTG.....MFLVYVCSIDILMGTGAGTNGANGLCHLGRITTSK.....AGHNVLSVRILT 119  
Consensus ..... p y l f a s d l m g g n g a p l g s g a v a

CeACB6 .....QNFYVAGSGSLASGVCWVWGERCAARISLIFRALIPDPAFFDINSGVWGMGSDILITCANGEGVGFKNLSTELIAYIVAPAGWLLIDMLSLIFEMAIGGVMTVHSMASSHEP 215  
Dendrobium\_chrysotoxum .....QNFYVAGSGSLASGVCWVWGERCAARISLIFRALIPDPAFFDINSGVWGMGSDILITCANGEGVGFKNLSTELIAYIVAPAGWLLIDMLSLIFEMAIGGVMTVHSMASSHEP 212  
Phalaenopsis\_equestris .....QNFYVAGSGSLASGVCWVWGERCAARISLIFRALIPDPAFFDINSGVWGMGSDILITCANGEGVGFKNLSTELIAYIVAPAGWLLIDMLSLIFEMAIGGVMTVHSMASSHEP 214  
Dendrobium\_catenatum .....QNFYVAGSGSLASGVCWVWGERCAARISLIFRALIPDPAFFDINSGVWGMGSDILITCANGEGVGFKNLSTELIAYIVAPAGWLLIDMLSLIFEMAIGGVMTVHSMASSHEP 256  
Vanilla planifolia .....EFVYVAGSGSVASGVCWVWGERCAARISLIFRALIPDPAFFDINSGVWGMGSDILITCANGEGVGFKNLSTELIAYIVAPAGWLLIDMLSLIFEMAIGGVMTVHSMASSHEP 255  
Apostasia\_shenzhenica .....EFVYVAGSGSVASGVCWVWGERCAARISLIFRALIPDPAFFDINSGVWGMGSDILITCANGEGVGFKNLSTELIAYIVAPAGWLLIDMLSLIFEMAIGGVMTVHSMASSHEP 249  
Consensus ..... l a g s s f q v c m g e r q i r y l q e a f f d e g e v m s d l i q a n g e v g k f i l s t z f g w l l i m s l p g a v s m s s

CeACB6 .....KAAFPASDVEGTISIRTVASGTGERHSVHAKALNGAVISGIEGLISGAGVLVFLNYSCHAFGLNNSANVANN...GYTGGVIAVLYTVVLGALALGAPGLTAFTCAAFRFVSEHNRK 343  
Dendrobium\_chrysotoxum .....KSAIPASDVEGTISIRTVASGTGERLAVHAKALNGAVISGIEGLITGAGVLVFLNYSCHAFGLNNSKILNK...GYTGGVIAVLYTVVLGALALGAPGLTAFTCAAFRFVSEHNRK 340  
Phalaenopsis\_equestris .....KSAIPASDVEGTISIRTVASGTGERLAVHAKALNGAVISGIEGLISGAGVLVFLNYSCHAFGLNNSKILNK...GYTGGVIAVLYTVVLGALALGAPGLTAFTCAAFRFVSEHNRK 342  
Dendrobium\_catenatum .....KSAIPASDVEGTISIRTVASGTGERLAVHAKALNGAVISGIEGLITGAGVLVFLNYSCHAFGLNNSKILNK...GYTGGVIAVLYTVVLGALALGAPGLTAFTCAAFRFVSEHNRK 336  
Vanilla planifolia .....KSAIPASDVEGTISIRTVASGTGERLAVHAKALNGAVISGIEGLITGAGVLVFLNYSCHAFGLNNSKILNK...GYTGGVIAVLYTVVLGALALGAPGLTAFTCAAFRFVSEHNRK 384  
Apostasia\_shenzhenica .....KSAIPASDVEGTISIRTVASGTGERLAVHAKALNGAVISGIEGLITGAGVLVFLNYSCHAFGLNNSKILNK...GYTGGVIAVLYTVVLGALALGAPGLTAFTCAAFRFVSEHNRK 379  
Consensus ..... y a v e g t s i r t v a t g e k y a l e y s e g l g g

CeACB6 .....PEIDANDSTGQDDIGDIERHVSFYPHREICIGFSFSLINSGITVALVGESESGKSTISLIERFYDCGSELIDGNINRFGCRLRGKIGVSCHEFLRSGTGNISVKGKIDTETERR 473  
Dendrobium\_chrysotoxum .....PEIDANDSTGQDDIGDIERHVSFYPHREICIGFSFSLINSGITVALVGESESGKSTISLIERFYDCGSELIDGNINRFGCRLRGKIGVSCHEFLRSGTGNISVKGKIDTETERR 470  
Phalaenopsis\_equestris .....PEIDANDSTGQDDIGDIERHVSFYPHREICIGFSFSLINSGITVALVGESESGKSTISLIERFYDCGSELIDGNINRFGCRLRGKIGVSCHEFLRSGTGNISVKGKIDTETERR 472  
Dendrobium\_catenatum .....PEIDANDSTGQDDIGDIERHVSFYPHREICIGFSFSLINSGITVALVGESESGKSTISLIERFYDCGSELIDGNINRFGCRLRGKIGVSCHEFLRSGTGNISVKGKIDTETERR 466  
Vanilla planifolia .....PEIDANDSTGQDDIGDIERHVSFYPHREICIGFSFSLINSGITVALVGESESGKSTISLIERFYDCGSELIDGNINRFGCRLRGKIGVSCHEFLRSGTGNISVKGKIDTETERR 514  
Apostasia\_shenzhenica .....PEIDANDSTGQDDIGDIERHVSFYPHREICIGFSFSLINSGITVALVGESESGKSTISLIERFYDCGSELIDGNINRFGCRLRGKIGVSCHEFLRSGTGNISVKGKIDTETERR 509  
Consensus ..... i d k d d i g d i e f v f a y p r e q l f g f l g t t a l v g e s e g k s t s l i e r f y d c g e l i d g n i k f q r w l r i g v s c h e f l r s g t g n i s v k g k i d t e e r

CeACB6 .....AALANASFINMPOGDTMVGEHSGLSGGGCRIPARALIPDPAFFDINSGVWGMGSDILITCANGEGVGFKNLSTELIAYIVAPAGWLLIDMLSLIFEMAIGGVMTVHSMASSHEP 603  
Dendrobium\_chrysotoxum .....AALANASFINMPOGDTMVGEHSGLSGGGCRIPARALIPDPAFFDINSGVWGMGSDILITCANGEGVGFKNLSTELIAYIVAPAGWLLIDMLSLIFEMAIGGVMTVHSMASSHEP 600  
Phalaenopsis\_equestris .....AALANASFINMPOGDTMVGEHSGLSGGGCRIPARALIPDPAFFDINSGVWGMGSDILITCANGEGVGFKNLSTELIAYIVAPAGWLLIDMLSLIFEMAIGGVMTVHSMASSHEP 602  
Dendrobium\_catenatum .....AALANASFINMPOGDTMVGEHSGLSGGGCRIPARALIPDPAFFDINSGVWGMGSDILITCANGEGVGFKNLSTELIAYIVAPAGWLLIDMLSLIFEMAIGGVMTVHSMASSHEP 596  
Vanilla planifolia .....AALANASFINMPOGDTMVGEHSGLSGGGCRIPARALIPDPAFFDINSGVWGMGSDILITCANGEGVGFKNLSTELIAYIVAPAGWLLIDMLSLIFEMAIGGVMTVHSMASSHEP 644  
Apostasia\_shenzhenica .....AALANASFINMPOGDTMVGEHSGLSGGGCRIPARALIPDPAFFDINSGVWGMGSDILITCANGEGVGFKNLSTELIAYIVAPAGWLLIDMLSLIFEMAIGGVMTVHSMASSHEP 639  
Consensus ..... a l a n a f i m p o g d t m v g e h g l s g g g c r i p a r a l i p d p a f f d i n s g v w g m g s d i l i t c a n g e v g f k n l s t e l i a y i v a p a g w l l i d m l s l i f e m a i g g v m t v h s m a s s h e p

CeACB6 .....QCSDETSQCEK.....DKRSLSEFETSRN..ESFMRRS...SPHSFSENIETLFPNRSR...VTFKLEFEESFSGVSRRCSPAGLGVGVHVGSGSTSLVKTITDPKRAITVSLR...VGNRP 721  
Dendrobium\_chrysotoxum .....QCSDETSQCEK.....DKRSLSEFETSRN..ESFMRRS...SPHSFSENIETLFPNRSR...VTFKLEFEESFSGVSRRCSPAGLGVGVHVGSGSTSLVKTITDPKRAITVSLR...VGNRP 730  
Phalaenopsis\_equestris .....QCSDETSQCEK.....DKRSLSEFETSRN..ESFMRRS...SPHSFSENIETLFPNRSR...VTFKLEFEESFSGVSRRCSPAGLGVGVHVGSGSTSLVKTITDPKRAITVSLR...VGNRP 719  
Dendrobium\_catenatum .....QCSDETSQCEK.....DKRSLSEFETSRN..ESFMRRS...SPHSFSENIETLFPNRSR...VTFKLEFEESFSGVSRRCSPAGLGVGVHVGSGSTSLVKTITDPKRAITVSLR...VGNRP 726  
Vanilla planifolia .....QCSDETSQCEK.....DKRSLSEFETSRN..ESFMRRS...SPHSFSENIETLFPNRSR...VTFKLEFEESFSGVSRRCSPAGLGVGVHVGSGSTSLVKTITDPKRAITVSLR...VGNRP 736  
Apostasia\_shenzhenica .....QCSDETSQCEK.....DKRSLSEFETSRN..ESFMRRS...SPHSFSENIETLFPNRSR...VTFKLEFEESFSGVSRRCSPAGLGVGVHVGSGSTSLVKTITDPKRAITVSLR...VGNRP 729  
Consensus ..... n s g s r s f q l g p i e l l n k p

CeACB6 .....EAGHLLISVAHNGVHVGVLISGVNINRPHHKKRHSFRLHGVNVLAVGVSFFPAAGSLIRIRIMFEKVNMHWFIDPFNSGAVSRLSDAPVRSVVGRLGVQ 851  
Dendrobium\_chrysotoxum .....EAGHLLISVAHNGVHVGVLISGVNINRPHHKKRHSFRLHGVNVLAVGVSFFPAAGSLIRIRIMFEKVNMHWFIDPFNSGAVSRLSDAPVRSVVGRLGVQ 860  
Phalaenopsis\_equestris .....EAGHLLISVAHNGVHVGVLISGVNINRPHHKKRHSFRLHGVNVLAVGVSFFPAAGSLIRIRIMFEKVNMHWFIDPFNSGAVSRLSDAPVRSVVGRLGVQ 849  
Dendrobium\_catenatum .....EAGHLLISVAHNGVHVGVLISGVNINRPHHKKRHSFRLHGVNVLAVGVSFFPAAGSLIRIRIMFEKVNMHWFIDPFNSGAVSRLSDAPVRSVVGRLGVQ 856  
Vanilla planifolia .....EAGHLLISVAHNGVHVGVLISGVNINRPHHKKRHSFRLHGVNVLAVGVSFFPAAGSLIRIRIMFEKVNMHWFIDPFNSGAVSRLSDAPVRSVVGRLGVQ 866  
Apostasia\_shenzhenica .....EAGHLLISVAHNGVHVGVLISGVNINRPHHKKRHSFRLHGVNVLAVGVSFFPAAGSLIRIRIMFEKVNMHWFIDPFNSGAVSRLSDAPVRSVVGRLGVQ 859  
Consensus ..... e p l g a l g v p g s s y p p d f w l l v r y f f a g s l i r i r f e k v n m e w f d n s g a v s r l s d a p v r s v g r l g v q

CeACB6 .....SIKAVAGLHAGSSEINLHGVNVLAVGVSFFPAAGSLIRIRIMFEKVNMHWFIDPFNSGAVSRLSDAPVRSVVGRLGVQ 981  
Dendrobium\_chrysotoxum .....NAASVAGLHAGSSEINLHGVNVLAVGVSFFPAAGSLIRIRIMFEKVNMHWFIDPFNSGAVSRLSDAPVRSVVGRLGVQ 990  
Phalaenopsis\_equestris .....NAASVAGLHAGSSEINLHGVNVLAVGVSFFPAAGSLIRIRIMFEKVNMHWFIDPFNSGAVSRLSDAPVRSVVGRLGVQ 978  
Dendrobium\_catenatum .....NAASVAGLHAGSSEINLHGVNVLAVGVSFFPAAGSLIRIRIMFEKVNMHWFIDPFNSGAVSRLSDAPVRSVVGRLGVQ 986  
Vanilla planifolia .....NITITAGLHAGSSEINLHGVNVLAVGVSFFPAAGSLIRIRIMFEKVNMHWFIDPFNSGAVSRLSDAPVRSVVGRLGVQ 996  
Apostasia\_shenzhenica .....NITITAGLHAGSSEINLHGVNVLAVGVSFFPAAGSLIRIRIMFEKVNMHWFIDPFNSGAVSRLSDAPVRSVVGRLGVQ 989  
Consensus ..... l l e a f a w l l i p l g n w i q k f g f s d a m a q n d a v l r t v s f a e e k v y k k c p m g l r q v i s i g l g s l y a y g a l g k

CeACB6 .....STEEKVRERVYVLIATVGHGSGGFSKSRKATPSFALINGSRSHISGTLTVGKNIRHVSFPRRPFDFCNKCLEVQGRSDAVGESGSGKSTIALLQREYDPPGSGVMD 1111  
Dendrobium\_chrysotoxum .....STEEKVRERVYVLIATVGHGSGGFSKSRKATPSFALINGSRSHISGTLTVGKNIRHVSFPRRPFDFCNKCLEVQGRSDAVGESGSGKSTIALLQREYDPPGSGVMD 1120  
Phalaenopsis\_equestris .....STEEKVRERVYVLIATVGHGSGGFSKSRKATPSFALINGSRSHISGTLTVGKNIRHVSFPRRPFDFCNKCLEVQGRSDAVGESGSGKSTIALLQREYDPPGSGVMD 1108  
Dendrobium\_catenatum .....STEEKVRERVYVLIATVGHGSGGFSKSRKATPSFALINGSRSHISGTLTVGKNIRHVSFPRRPFDFCNKCLEVQGRSDAVGESGSGKSTIALLQREYDPPGSGVMD 1116  
Vanilla planifolia .....TIEKVRERVYVLIATVGHGSGGFSKSRKATPSFALINGSRSHISGTLTVGKNIRHVSFPRRPFDFCNKCLEVQGRSDAVGESGSGKSTIALLQREYDPPGSGVMD 1126  
Apostasia\_shenzhenica .....TIEKVRERVYVLIATVGHGSGGFSKSRKATPSFALINGSRSHISGTLTVGKNIRHVSFPRRPFDFCNKCLEVQGRSDAVGESGSGKSTIALLQREYDPPGSGVMD 1119  
Consensus ..... t f v r i l g i q s s s k a a s f a r s k i p s g t l e g n i f n f y l p d q f q c l q a a v e s s g k s t i a l l q r e y d p p g s v m d

CeACB6 .....TEHQHGFRLRQCMGLVSCERFLNDTHHNIAVGNDCRATQRETIAPADANAHFESHCQGVTVVGRGVQLSGGCRQATARAIRPEPKILLLEATSALDASEKVGQALDQVNNRTTI 1241  
Dendrobium\_chrysotoxum .....TEHQHGFRLRQCMGLVSCERFLNDTHHNIAVGNDCRATQRETIAPADANAHFESHCQGVTVVGRGVQLSGGCRQATARAIRPEPKILLLEATSALDASEKVGQALDQVNNRTTI 1250  
Phalaenopsis\_equestris .....TEHQHGFRLRQCMGLVSCERFLNDTHHNIAVGNDCRATQRETIAPADANAHFESHCQGVTVVGRGVQLSGGCRQATARAIRPEPKILLLEATSALDASEKVGQALDQVNNRTTI 1238  
Dendrobium\_catenatum .....TEHQHGFRLRQCMGLVSCERFLNDTHHNIAVGNDCRATQRETIAPADANAHFESHCQGVTVVGRGVQLSGGCRQATARAIRPEPKILLLEATSALDASEKVGQALDQVNNRTTI 1246  
Vanilla planifolia .....TEHQHGFRLRQCMGLVSCERFLNDTHHNIAVGNDCRATQRETIAPADANAHFESHCQGVTVVGRGVQLSGGCRQATARAIRPEPKILLLEATSALDASEKVGQALDQVNNRTTI 1255  
Apostasia\_shenzhenica .....TEHQHGFRLRQCMGLVSCERFLNDTHHNIAVGNDCRATQRETIAPADANAHFESHCQGVTVVGRGVQLSGGCRQATARAIRPEPKILLLEATSALDASEKVGQALDQVNNRTTI 1248  
Consensus ..... l f i w l r q c m g l v s c e r f l n d t h h n i a v g n d c r a t q r e t i a p a d a n a h f e s h c q g v t v g r g v l s g g c r q a t a r a i r p e p k i l l l e a t s a l d a s e k v g a l d m t t

CeACB6 .....TIVHRLTISIRNTLHAYKNGRIDHGGVHNSHGGVAAANIAHMTNASS..... 1293  
Dendrobium\_chrysotoxum .....TIVHRLTISIRNTLHAYKNGRIDHGGVHNSHGGVAAANIAHMTNASS..... 1310  
Phalaenopsis\_equestris .....TIVHRLTISIRNTLHAYKNGRIDHGGVHNSHGGVAAANIAHMTNASS..... 1290  
Dendrobium\_catenatum .....TIVHRLTISIRNTLHAYKNGRIDHGGVHNSHGGVAAANIAHMTNASS..... 1298  
Vanilla planifolia .....VIVHRLTISIRNTLHAYKNGRIDHGGVHNSHGGVAAANIAHMTNASS..... 1308  
Apostasia\_shenzhenica .....VIVHRLTISIRNTLHAYKNGRIDHGGVHNSHGGVAAANIAHMTNASS..... 1300  
Consensus ..... h z i t i k n a v k n g i e g h l n k g

Supplementary Figure S1. Multiple alignment of CeACB6 with other ABC proteins.