

Figure S17

Complete alignment of DBP1 protein sequences

PCYB\_063270-t26\_1-p1 MKGKNRPLFVLLVLLSHKVNVLLETTIETLQECKNECVKGENCYKLSKGHHYI EEDNIERWLQGTNERRSEENIKYKY  
PcyM\_0628800-t36\_1-p1 MKGKNRPLFVLLVLLSHKVNVLLETTIETLQECKNECVKGENCYKLSKGHHYI EEDNIERWLQGTNERRSEENIKYKY  
PVP01\_0623800.1-p1 MKGKNRSLFVLLVLLSHKVNVLLETTIETLLECKNEYVKGNGYKLAGHHHCVEEDNLERWLQGTNERRSEENIKYKY  
PVX\_110810.1-p1 MKGKNRSLFVLLVLLSHKVNVLLETTIETLLECKNEYVKGNGYKLAGHHHCVEEDNLERWLQGTNERRSEENIKYKY  
Psim2302\_000333900.1 MKGKNRSLFVLLVLLSHKVNVLLETTIETLLECKNEYVKGNGYKLAGHHHCVEEDNLERWLQGTNERRSEENIKYKY  
Psim3636\_000376000.1 MKGKNRSLFVLLVLLSHKVNVLLETTIETLLECKNEYVKGNGYKLAGHHHCVEEDNLERWLQGTNERRSEENIKYKY  
PsimAD002\_000401800.1 MKGKNRSLFVLLVLLSHKVNVLLETTIETLLECKNEYVKGNGYKLAGHHHCVEEDNLERWLQGTNERRSEENIKYKY  
PsimAD005\_000131600.1 MKGKNRSLFVLLVLLSHKVNVLLETTIETLLECKNEYVKGNGYKLAGHHHCVEEDNLERWLQGTNERRSEENIKYKY  
PsimAF28\_001016200.1 MKGKNRSLFVLLVLLSHKVNVLLETTIETLLECKNEYVKGNGYKLAGHHHCVEEDNLERWLQGTNERRSEENIKYKY  
PsimAF33\_000351600.1 MKGKNRSLFVLLVLLSHKVNVLLETTIETLLECKNEYVKGNGYKLAGHHHCVEEDNLERWLQGTNERRSEENIKYKY  
PvivaxAM01\_000437300.1 MKGKNRSLFVLLVLLSHKVNVLLETTIETLLECKNEYVKGNGYKLAGHHHCVEEDNLERWLQGTNERRSEENIKYKY  
PvivaxAM02\_000308000.1 MKGKNRSLFVLLVLLSHKVNVLLETTIETLLECKNEYVKGNGYKLAGHHHCVEEDNLERWLQGTNERRSEENIKYKY  
AAZ81533.1 MKGKNRSLFVLLVLLSHKVNVLLETTIETLLECKNEYVKGNGYKLAGHHHCVEEDNLERWLQGTNERRSEENIKYKY  
AAZ81530.1 MKGKNRSLFVLLVLLSHKVNVLLETTIETLLECKNEYVKGNGYKLAGHHHCVEEDNLERWLQGTNERRSEENIKYKY  
ABA39301.1 MKGKNRSLFVLLVLLSHKVNVLLETTIETLLECKNEYVKGNGYKLAGHHHCVEEDNLERWLQGTNERRSEENIKYKY  
ACB42428.1 MKGKNRSLFVLLVLLSHKVNVLLETTIETLLECKNEYVKGNGYKLAGHHHCVEEDNLERWLQGTNERRSEENIKYKY  
ACB42432 MKGKNRSLFVLLVLLSHKVNVLLETTIETLLECKNEYVKGNGYKLAGHHHCVEEDNLERWLQGTNERRSEENIKYKY  
PVL\_060021400-t42\_1-p1 MKGKNRSLFVLLVLLSHKVNVLLETTIETLLECKNEYVKGNGYKLAGHHHCVEEDNLERWLQGTNERRSEENIKYKY  
ACB42432.1 MKGKNRSLFVLLVLLSHKVNVLLETTIETLLECKNEYVKGNGYKLAGHHHCVEEDNLERWLQGTNERRSEENIKYKY

PCYB\_063270-t26\_1-p1 GVTELKIKYEQMNGKRTSRILKESIYAQNFDDNYYR-----EEDKGEHKTDSKTDNGRSANNLVMLDYDTSSSG  
PcyM\_0628800-t36\_1-p1 GVTELKIKYEQMNGKRTSRILKESIYAQNFDDNYYR-----EEDKGEHKTDSKTDNGRSANNLVMLDYDTSSSG  
PVP01\_0623800.1-p1 GVTELKIKYEQMNGKRSSRILKESIYGAHNFGGNSYMEGKGGDKTGEEKDGHEHKTDSKTDNGKGANLVMMLDYETSSNG  
PVX\_110810.1-p1 GVTELKIKYEQMNGKRSSRILKESIYGAHNFGGNSYMEGKGGDKTGEEKDGHEHKTDSKTDNGKGANLVMMLDYETSSNG  
Psim2302\_000333900.1 GVTELKIKYEQMNGKRSSRILKESIYGAHNFGGNSYMEGKGGDKTGEEKDGHEHKTDSKTDNGKGANLVMMLDYETSSNG  
Psim3636\_000376000.1 GVTELKIKYEQMNGKRSSRILKESIYGAHNFGGNSYMEGKGGDKTGEEKDGHEHKTDSKTDNGKGANLVMMLDYETSSNG  
PsimAD002\_000401800.1 GVTELKIKYEQMNGKRSSRILKESIYGAHNFGGNSYMEGKGGDKTGEEKDGHEHKTDSKTDNGKGANLVMMLDYETSSNG  
PsimAD005\_000131600.1 GVTELKIKYEQMNGKRSSRILKESIYGAHNFGGNSYMEGKGGDKTGEEKDGHEHKTDSKTDNGKGANLVMMLDYETSSNG  
PsimAF28\_001016200.1 GVTELKIKYEQMNGKRSSRILKESIYGAHNFGGNSYMEGKGGDKTGEEKDGHEHKTDSKTDNGKGANLVMMLDYETSSNG  
PsimAF33\_000351600.1 GVTELKIKYEQMNGKRSSRILKESIYGAHNFGGNSYMEGKGGDKTGEEKDGHEHKTDSKTDNGKGANLVMMLDYETSSNG  
PvivaxAM01\_000437300.1 GVTELKIKYEQMNGKRSSRILKESIYGAHNFGGNSYMEGKGGDKTGEEKDGHEHKTDSKTDNGKGANLVMMLDYETSSNG  
PvivaxAM02\_000308000.1 GVTELKIKYEQMNGKRSSRILKESIYGAHNFGGNSYMEGKGGDKTGEEKDGHEHKTDSKTDNGKGANLVMMLDYETSSNG  
AAZ81533.1 GVTELKIKYEQMNGKRSSRILKESIYGAHNFGGNSYMEGKGGDKTGEEKDGHEHKTDSKTDNGKGANLVMMLDYETSSNG  
AAZ81530.1 GVTELKIKYEQMNGKRSSRILKESIYGAHNFGGNSYMEGKGGDKTGEEKDGHEHKTDSKTDNGKGANLVMMLDYETSSNG  
ABA39301.1 GVTELKIKYEQMNGKRSSRILKESIYGAHNFGGNSYMEGKGGDKTGEEKDGHEHKTDSKTDNGKGANLVMMLDYETSSNG  
ACB42428.1 GVTELKIKYEQMNGKRSSRILKESIYGAHNFGGNSYMEGKGGDKTGEEKDGHEHKTDSKTDNGKGANLVMMLDYETSSNG  
ACB42432 GVTELKIKYEQMNGKRSSRILKESIYGAHNFGGNSYMEGKGGDKTGEEKDGHEHKTDSKTDNGKGANLVMMLDYETSSNG  
PVL\_060021400-t42\_1-p1 DVTELKIKYEQMNGKRSSRILKESIYGAHNFGGNSYMEGKGGDKTGEEKDGHEHKTDSKTDNGKGANLVMMLDYETSSNG  
ACB42432.1 GVTELKIKYEQMNGKRSSRILKESIYGAHNFGGNSYMEGKGGDKTGEEKDGHEHKTDSKTDNGKGANLVMMLDYETSSNG

PCYB\_063270-t26\_1-p1 HPAVTLDNVLEFVTDHGENSLENSNGNLYDIVHKKTMSSGVINHAFLQNSEIVTCNDKRRQRVRDWCSTKQKDVCI  
PcyM\_0628800-t36\_1-p1 HPAVTLDNVLEFVTDHGENSLENSNGNLYDIVHKKTMSSGVINHAFLQNSEIVTCNDKRRQRVRDWCSTKQKDVCI  
PVP01\_0623800.1-p1 QPAGTLDNVLEFVTGHEGNSRKNSSNGNPNYIDHKKTISSAIINHAFLQNTVMKNCNYKRRRERDWCNTKQKDVCI  
PVX\_110810.1-p1 QPAGTLDNVLEFVTGHEGNSRKNSSNGNPNYIDHKKTISSAIINHAFLQNTVMKNCNYKRRRERDWCNTKQKDVCI  
Psim2302\_000333900.1 QPAGTLDNVLEFVTGHEGNSRKNSSNGNPNYIDHKKTISSAIINHAFLQNTVMKNCNYKRRRERDWCNTKQKDVCI  
Psim3636\_000376000.1 QPAGTLDNVLEFVTGHEGNSRKNSSNGNPNYIDHKKTISSAIINHAFLQNTVMKNCNYKRRRERDWCNTKQKDVCI  
PsimAD002\_000401800.1 QPAGTLDNVLEFVTGHEGNSRKNSSNGNPNYIDHKKTISSAIINHAFLQNTVMKNCNYKRRRERDWCNTKQKDVCI  
PsimAD005\_000131600.1 QPAGTLDNVLEFVTGHEGNSRKNSSNGNPNYIDHKKTISSAIINHAFLQNTVMKNCNYKRRRERDWCNTKQKDVCI  
PsimAF28\_001016200.1 QPAGTLDNVLEFVTGHEGNSRKNSSNGNPNYIDHKKTISSAIINHAFLQNTVMKNCNYKRRRERDWCNTKQKDVCI  
PsimAF33\_000351600.1 QPAGTLDNVLEFVTGHEGNSRKNSSNGNPNYIDHKKTISSAIINHAFLQNTVMKNCNYKRRRERDWCNTKQKDVCI  
PvivaxAM01\_000437300.1 QPAGTLDNVLEFVTGHEGNSRKNSSNGNPNYIDHKKTISSAIINHAFLQNTVMKNCNYKRRRERDWCNTKQKDVCI  
PvivaxAM02\_000308000.1 EPAGTLDNVLEFVTGHEGNSRKNSSNGNPNYIDHKKTISSAIINHAFLQNTVMKNCNYKRRRERDWCNTKQKDVCI  
AAZ81533.1 QPAGTLDNVLEFVTGHEGNSRKNSSNGNPNYIDHKKTISSAIINHAFLQNTVMKNCNYKRRRERDWCNTKQKDVCI  
AAZ81530.1 QPAGTLDNVLEFVTGHEGNSRKNSSNGNPNYIDHKKTISSAIINHAFLQNTVMKNCNYKRRRERDWCNTKQKDVCI  
ABA39301.1 QPAGTLDNVLEFVTGHEGNSRKNSSNGNPNYIDHKKTISSAIINHAFLQNTVMKNCNYKRRRERDWCNTKQKDVCI  
ACB42428.1 QPAGTLDNVLEFVTGHEGNSRKNSSNGNPNYIDHKKTISSAIINHAFLQNTVMKNCNYKRRRERDWCNTKQKDVCI  
ACB42432 QPAGTLDNVLEFVTGHEGNSRKNSSNGNPNYIDHKKTISSAIINHAFLQNTVMKNCNYKRRRERDWCNTKQKDVCI  
PVL\_060021400-t42\_1-p1 QPTGTLDNVLEFVTGHEGNSRKNSSNGNPNYIDHKKTISSAIINHAFLQNSVMKNCNDRKRRERDWCNTKQKDVCI  
ACB42432.1 QPAGTLDNVLEFVTGHEGNSRKNSSNGNPNYIDHKKTISSAIINHAFLQNTVMKNCNDRKRRERDWCNTKQKDVCI







Figure S17 (cont.)

PCYB_063270-t26_1-p1	MSSNTCSREKSKNLCCSISDYCLNYFEVYTNEYHNCMKKEFEDPSYKCFKGGFTDKAYFAAGGALLILLLLITSRHMII
PcyM_0628800-t36_1-p1	MSSNTCSREKSKNLCCSISDYCLNYFEVYTNEYHNCMKKEFEDPSYKCFKGGFTDKAYFAAGGALLILLLLITSRHMII
PVP01_0623800.1-p1	ISSNTCSREKSKNLCCSISDFCLNYFDVYSYEHSCMKKEFEDPSYKCFKGGFKDKTYFAAAGALLILLLLIASRKMII
PVX_110810.1-p1	ISSNTCSREKSKNLCCSISDFCLNYFDVYSYEYLSCKMKEFEDPSYKCFKGGFKDKTYFAAAGALLILLLLIASRKMII
Psim2302_000333900.1	ISSNTCSREKSKNLCCSISDFCLNYFDVHSYEYLSCKMKEFEDPSYKCFKGGFKDKTYFAAAGALLILLLLIASRKMII
Psim3636_000376000.1	ISSNTCSREKSKNLCCSISDFCLNYFDVHSYEYLSCKMKEFEDPSYKCFKGGFKDKTYFAAAGALLILLLLIASRKMII
PsimAD002_000401800.1	ISSNTCSREKSKNLCCSISDFCLNYFDVHSYEYLSCKMKEFEDPSYKCFKGGFKDKTYFAAAGALLILLLLIASRKMII
PsimAD005_000131600.1	ISSNTCSREKSKNLCCSISDFCLNYFDVHSYEYLSCKMKEFEDPSYKCFKGGFKDKTYFAAAGALLILLLLIASRKMII
PsimAF28_001016200.1	ISSNTCSREKSKNLCCSISDFCLNYFDVHSYEYLSCKMKEFEDPSYKCFKGGFKDKTYFAAAGALLILLLLIASRKMII
PsimAF33_000351600.1	ISSNTCSREKSKNLCCSISDFCLNYFDVHSYEYLSCKMKEFEDPSYKCFKGGFKDKTYFAAAGALLILLLLIASRKMII
PvivaxAM01_000437300.1	ISSNTCSREKSKNLCCSISDFCLNYFDVNSYEHSCMKKEFEDPSYKCFKGGFKDKTYFAAAGALLILLLLIASRKMII
PvivaxAM02_000308000.1	ISSNTCSREKSKNLCCSISDFCLNYFDVYSYEYLSCKMKEFEDPSYKCFKGGFKDKTYFAAAGALLILLLLIASRKMII
AAZ81533.1	ISSNTCSREKSKNLCCSISDFCLNYFDVYSYEYLSCKMKEFEDPSYKCFKGGFKDKTYFAAAGALLILLLLIASRKMII
AAZ81530.1	ISSNTCSREKSKNLCCSISDFCLNYFDVNSYEHSCMKKEFEDPSYKCFKGGFKDKTYFAAAGALLILLLLIASRKMII
ABA39301.1	ISSNTCSREKSKNLCCSISDFCLNYFDVYSYEYLSCKMKEFEDPSYKCFKGGFKDKTYFAAAGALLILLLLIASRKMII
ACB42428.1	ISSNTCSREKSKNLCCSISDFCLNYFDVNSYEHSCVKKEFEDPSYKCFKGGFKDKTYFAAAGALLILLLLIASRKMII
ACB42432	ISSNTCSREKSKNLCCSISDFCLNYFDVHSYEYLSCKMKEFEDPSYKCFKGGFKDKTYFAAAGALLILLLLIASRKMII
PVL_060021400-t42_1-p1	ISSNTCSREKSKNLCCSISDFCLNYFDVYSFEYHNCMKKEFEDPSYKCFKGGFTDNTYFAAAGALLILLLLIASRKMII
ACB42432.1	ISSNTCSREKSKNLCCSISDFCLNYFDVHSYEYLSCKMKEFEDPSYKCFKGGFKDKTYFAAAGALLILLLLIASRKMII
Trans-membrane domain	<----->
PCYB_063270-t26_1-p1	NDSEEATFNEFEEHCDNIQRIPLMPNIEHMQLTPLDYS
PcyM_0628800-t36_1-p1	NDSEEATFNEFEEHCDNIQRIPLMPNIEHMQLTPLDYS
PVP01_0623800.1-p1	NDSEEATFNEFEEYCDNIHRIPLMPNIEHMQPSTPLDYS
PVX_110810.1-p1	NDSEEATFNEFEEYCDNIHRIPLMPNIEHMQPSTPLDYS
Psim2302_000333900.1	NDSEEATFNEFEEYCDNIHRIPLMPNIEHMQPSTPLDYS
Psim3636_000376000.1	NDSEEATFNEFEEYCDNIHRIPLMPNIEHMQPSTPLDYS
PsimAD002_000401800.1	NDSEEATFNEFEEYCDNIHRIPLMPNIEHMQPSTPLDYS
PsimAD005_000131600.1	NDSEEATFNEFEEYCDNIHRIPLMPNIEHMQPSTPLDYS
PsimAF28_001016200.1	NDSEEATFNEFEEYCDNIHRIPLMPNIEHMQPSTPLDYS
PsimAF33_000351600.1	NDSEEATFNEFEEYCDNIHRIPLMPNIEHMQPSTPLDYS
PvivaxAM01_000437300.1	NDSEEATFNEFEEYCDNIHRIPLMPNIEHMQPSTPLDYS
PvivaxAM02_000308000.1	NDSEEATFNEFEEYCDNIHRIPLMPNIEHMQPSTPLDYS
AAZ81533.1	NDSEEATFNEFEEYCDNIHRIPLM-----
AAZ81530.1	NDSEEATFNEFEEYCDNIHRIPLM-----
ABA39301.1	NDSEEATFNAFEEYCDNIHRIPLM-----
ACB42428.1	NDSEEATFKEFEEYCDNIHRIPLMPNIEHMQPSTPLDYS
ACB42432	NDSEEATFNEFEEYCDNIHRIPLMPNIEHMQPSTPLDYS
PVL_060021400-t42_1-p1	NDSEEATFNEFEEYCDNIHRIPLMPNIEHMQPSTPLDYS
ACB42432.1	NDSEEATFNEFEEYCDNIHRIPLMPNIEHMQPSTPLDYS