

Figure S25

Complete alignment of RBP2a protein sequences

PVX_121920.1-p1 MENKVLWAVFYNLVFLFLLASSKESNRKAYKYLKKEPKLWPLQDSLNESDKFEYTTGGKENPPNFFSSNVKAHNKKEGKKY
PVP01_1402400.1-p1 MENKVLWAVFYNLVFLFLLASSKESNRKAYKYLKKEPKLWPLQDSLNESDKFEYTTGGKENPPNFFSSNVKAHNKKEGKKY
Psm12302_000007000.1 MENKVLWAVFYNLVFLFLLASSKESNRKAYKYLKKEPKLWPLQDSLNESDKFEYTTGGKENPPNFFSSNVKAHNKKEGKKY
Psm13636_000006300.1 MENKVLWAVFYNLVFLFLLASSKESNRKAYKYLKKEPKLWPLQDSLNESDKFEYTTGGKENPPNFFSSNVKAHNKKEGKKY
PsmAD002_000007200.1 MENKVLWAVFYNLVFLFLLASSKESNRKAYKYLKKEPKLWPLQDSLNESDKFEYTTGGKENPPNFFSSNVKAHNKKEGKKY
PsmAD005_000448800.1 MENKVLWAVFYNLVFLFLLASSKESNRKAYKYLKKEPKLWPLQDSLNESDKFEYTTGGKENPPNFFSSNVKAHNKKEGKKY
PsmAF28_000006200.1 MENKVLWAVFYNLVFLFLLASSKESNRKAYKYLKKEPKLWPLQDSLNESDKFEYTTGGKENPPNFFSSNVKAHNKKEGKKY
PsmAF33_000006700.1 MENKVLWAVFYNLVFLFLLASSKESNRKAYKYLKKEPKLWPLQDSLNESDKFEYTTGGKENPPNFFSSNVKAHNKKEGKKY
PsmAF34_000005900.1 MENKVLWAVFYNLVFLFLLASSKESNRKAYKYLKKEPKLWPLQDSLNESDKFEYTTGGKENPPNFFSSNVKAHNKKEGKKY
PvivaxAM01_000076800.1 MENKVLWAVFYNLVFLFLLASSKESNRKAYKYLKKEPKLWPLQDSLNESDKFEYTTGGKENPPNFFSSNVKAHNKKEGKKY
PvivaxAM02_000474900.1 MENKVLWAVFYNLVFLFLLASSKESNRKAYKYLKKEPKLWPLQDSLNESDKFEYTTGGKENPPNFFSSNVKAHNKKEGKKY
PVL_140006600-t42_1-p1 MENKVLWAVFYNLVFLFLLASSKESNRKAYKYLKKEPKLWPLQDSLNESDKFEYTTGGKENPPNFFSSNVKAHNKKEGKKY

PVX_121920.1-p1 EQNLSPDNTSFVTVKKNYTRTPSHHAYIRRDNHTNSTNNNQIRNVPKELNPREFLFTPKNQISASLIQTNGPVAPMD
PVP01_1402400.1-p1 EQNLSPDNTSFVTVKKNYTRTPSHHAYIRRDNHTNSTNNNQIRNVPKELNPREFLFTPKNQISASLIQTNGPVAPMD
Psm12302_000007000.1 EQNLSPDNTSFVTVKKNYTRTPSHHAYIRRDNHTNSTNNNQIRNVPKELNPREFLFTPKNQISASLIQTNGPVAPMD
Psm13636_000006300.1 EQNLSPDNTSFVTVKKNYTRTPSHHAYIRRDNHTNSTNNNQIRNVPKELNPREFLFTPKNQISASLIQTNGPVAPMD
PsmAD002_000007200.1 EQNLSPDNTSFVTVKKNYTRTPSHHAYIRRDNHTNSTNNNQIRNVPKELNPREFLFTPKNQISASLIQTNGPVAPMD
PsmAD005_000448800.1 EQNLSPDNTSFVTVKKNYTRTPSHHAYIRRDNHTNSTNNNQIRNVPKELNPREFLFTPKNQISASLIQTNGPVAPMD
PsmAF28_000006200.1 EQNLSPDNTSFVTVKKNYTRTPSHHAYIRRDNHTNSTNNNQIRNVPKELNPREFLFTPKNQISASLIQTNGPVAPMD
PsmAF33_000006700.1 EQNLSPDNTSFVTVKKNYTRTPSHHAYIRRDNHTNSTNNNQIRNVPKELNPREFLFTPKNQISASLIQTNGPVAPMD
PsmAF34_000005900.1 EQNLSPDNTSFVTVKKNYTRTPSHHAYIRRDNHTNSTNNNQIRNVPKELNPREFLFTPKNQISASLIQTNGPVAPMD
PvivaxAM01_000076800.1 EQNLSPDNTSFVTVKKNYTRTPSHHAYIRRDNHTNSTNNNQIRNVPKELNPREFLFTPKNQISASLIQTNGPVAPMD
PvivaxAM02_000474900.1 EQNLSPDNTSFVTVKKNYTRTPSHHAYIRRDNHTNSTNNNQIRNVPKELNPREFLFTPKNQISASLIQTNGPVAPMD
PVL_140006600-t42_1-p1 EQNLSPDNTSFVTVKKNYTRTPSHHAYIRRDNHTNSTNNNQIRNVPKELNPREFLFTPKNQISASLIQTNGPVAPMD

PVX_121920.1-p1 ILRYLDFSNSSGQIISTVYFVYQMNMYFAEIKYYITYHYEAKKNYDEAYNQSVNPLMSSIQIQNSVCPKKALEKTFIV
PVP01_1402400.1-p1 ILRYLDFSNSSGQIISTVYFVYQMNMYFAEIKYYITYHYEAKKNYDEAYNQSVNPLMSSIQIQNSVCPKKALEKTFIV
Psm12302_000007000.1 ILRYLDFSNSSGQIISTVYFVYQMNMYFAEIKYYITYHYEAKKNYDEAYNQSVNPLMSSIQIQNSVCPKKALEKTFIV
Psm13636_000006300.1 ILRYLDFSNSSGQIISTVYFVYQMNMYFAEIKYYITYHYEAKKNYDEAYNQSVNPLMSSIQIQNSVCPKKALEKTFIV
PsmAD002_000007200.1 ILRYLDFSNSSGQIISTVYFVYQMNMYFAEIKYYITYHYEAKKNYDEAYNQSVNPLMSSIQIQNSVCPKKALEKTFIV
PsmAD005_000448800.1 ILRYLDFSNSSGQIISTVYFVYQMNMYFAEIKYYITYHYEAKKNYDEAYNQSVNPLMSSIQIQNSVCPKKALEKTFIV
PsmAF28_000006200.1 ILRYLDFSNSSGQIISTVYFVYQMNMYFAEIKYYITYHYEAKKNYDEAYNQSVNPLMSSIQIQNSVCPKKALEKTFIV
PsmAF33_000006700.1 ILRYLDFSNSSGQIISTVYFVYQMNMYFAEIKYYITYHYEAKKNYDEAYNQSVNPLMSSIQIQNSVCPKKALEKTFIV
PsmAF34_000005900.1 ILRYLDFSNSSGQIISTVYFVYQMNMYFAEIKYYITYHYEAKKNYDEAYNQSVNPLMSSIQIQNSVCPKKALEKTFIV
PvivaxAM01_000076800.1 ILRYLDFSNSSGQIISTVYFVYQMNMYFAEIKYYITYHYEAKKNYDEAYNQSVNPLMSSIQIQNSVCPKKALEKTFIV
PvivaxAM02_000474900.1 ILRYLDFSNSSGQIISTVYFVYQMNMYFAEIKYYITYHYEAKKNYDEAYNQSVNPLMSSIQIQNSVCPKKALEKTFIV
PVL_140006600-t42_1-p1 ILRYLDFSNSSGQIISTVYFVYQMNMYFAEIKYYITYHYEAKKNYDEAYNQSVNPLMSSIQIQNSVCPKKALEKTFIV

PVX_121920.1-p1 LEYPENHNINLSNYEAKHNEYKQLDAYKNCVQANMESYDRMSKFNEKIYSILNSVKCTDACETDYEIMLEIYVERVK
PVP01_1402400.1-p1 LEYPENHNINLSNYEAKHNEYKQLDAYKNCVQANMESYDRMSKFNEKIYSILNSVKCTDACETDYEIMLEIYVERVK
Psm12302_000007000.1 LEYPENHNINLSNYEAKHNEYKQLDAYKNCVQANMESYDRMSKFNEKIYSILNSVKCTDACETDYEIMLEIYVERVK
Psm13636_000006300.1 LEYPENHNINLSNYEAKHNEYKQLDAYKNCVQANMESYDRMSKFNEKIYSILNSVKCTDACETDYEIMLEIYVERVK
PsmAD002_000007200.1 LEYPENHNINLSNYEAKHNEYKQLDAYKNCVQANMESYDRMSKFNEKIYSILNSVKCTDACETDYEIMLEIYVERVK
PsmAD005_000448800.1 LEYPENHNINLSNYEAKHNEYKQLDAYKNCVQANMESYDRMSKFNEKIYSILNSVKCTDACETDYEIMLEIYVERVK
PsmAF28_000006200.1 LEYPENHNINLSNYEAKHNEYKQLDAYKNCVQANMESYDRMSKFNEKIYSILNSVKCTDACETDYEIMLEIYVERVK
PsmAF33_000006700.1 LEYPENHNINLSNYEAKHNEYKQLDAYKNCVQANMESYDRMSKFNEKIYSILNSVKCTDACETDYEIMLEIYVERVK
PsmAF34_000005900.1 LEYPENHNINLSNYEAKHNEYKQLDAYKNCVQANMESYDRMSKFNEKIYSILNSVKCTDACETDYEIMLEIYVERVK
PvivaxAM01_000076800.1 LEYPENHNINLSNYEAKHNEYKQLDAYKNCVQANMESYDRMSKFNEKIYSILNSVKCTDACETDYEIMLEIYVERVK
PvivaxAM02_000474900.1 LEYPENHNINLSNYEAKHNEYKQLDAYKNCVQANMESYDRMSKFNEKIYSILNSVKCTDACETDYEIMLEIYVERVK
PVL_140006600-t42_1-p1 LEYPENHNINLSNYEAKHNEYKQLDAYKNCVQANMESYDRMSKFNEKIYSILNSVKCTDACETDYEIMLEIYVERVK

PVX_121920.1-p1 EVNHNNYVNYLSTLKASLQLGVTLMKVKQIEDNNVTISAINFLQEEMLDIITIGEAHTGKIIHGKENVLKLQNNNIPPQ
PVP01_1402400.1-p1 EVNHNNYVNYLSTLKASLQLGVTLMKVKQIEDNNVTISAINFLQEEMLDIITIGEAHTGKIIHGKENVLKLQNNNIPSQ
Psm12302_000007000.1 EVNHNNYVNYLSTLKASLQLGVTLMKVKQIEDNNVTISAINFLQEEMLDIITIGEAHTGKIIHGKENVLKLQNNNIPPQ
Psm13636_000006300.1 EVNHNNYVNYLSTLKASLQLGVTLMKVKQIEDNNVTISAINFLQEEMLDIITIGEAHTGKIIHGKENVLKLQNNNIPPQ
PsmAD002_000007200.1 EVNHNNYVNYLSTLKASLQLGVTLMKVKQIEDNNVTISAINFLQEEMLDIITIGEAHTGKIIHGKENVLKLQNNNIPPQ
PsmAD005_000448800.1 EVNHNNYVNYLSTLKASLQLGVTLMKVKQIEDNNVTISAINFLQEEMLDIITIGEAHTGKIIHGKENVLKLQNNNIPPQ
PsmAF28_000006200.1 EVNHNNYVNYLSTLKASLQLGVTLMKVKQIEDNNVTISAINFLQEEMLDIITIGEAHTGKIIHGKENVLKLQNNNIPPQ
PsmAF33_000006700.1 EVNHNNYVNYLSTLKASLQLGVTLMKVKQIEDNNVTISAINFLQEEMLDIITIGEAHTGKIIHGKENVLKLQNNNIPPQ
PsmAF34_000005900.1 EVNHNNYVNYLSTLKASLQLGVTLMKVKQIEDNNVTISAINFLQEEMLDIITIGEAHTGKIIHGKENVLKLQNNNIPPQ
PvivaxAM01_000076800.1 EVNHNNYVNYLSTLKASLQLGVTLMKVKQIEDNNVTISAINFLQEEMLDIITIGEAHTGKIIHGKENVLKLQNNNIPSQ
PvivaxAM02_000474900.1 EVNHNNYVNYLSTLKASLQLGVTLMKVKQIEDNNVTISAINFLQEEMLDIITIGEAHTGKIIHGKENVLKLQNNNIPSQ
PVL_140006600-t42_1-p1 EVNLNNYVNYLSTLKASLQLGVTLMKVKQIEDNNVTISTINFLQEEMLDIITIGEAHTGKIIHGKENVLKLQKGEIPAE

PVX_121920.1-p1 VPLSTLKKLYFDSANFYATYKFLKRDTTTTAALKEKGLLANLKNLYTYVSEKIDKNLDSLYFISKSESMSIFEDTF
PVP01_1402400.1-p1 VPLSTLKKLYFDSANFYATYKFLKRDTTTTAALKEKGLLANLKNLYTYVSEKIDKNLDSLYFISKSESMSIFEDTF
Psm12302_000007000.1 VPLSTLKKLYFDSANFYATYKFLKRDTTTTAALKEKGLLANLKNLYTYVSEKIDKNLDSLYFISKSESMSIFEDTF
Psm13636_000006300.1 VPLSTLKKLYFDSANFYATYKFLKRDTTTTAALKEKGLLANLKNLYTYVSEKIDKNLDSLYFISKSESMSIFEDTF
PsmAD002_000007200.1 VPLSTLKKLYFDSANFYATYKFLKRDTTTTAALKEKGLLANLKNLYTYVSEKIDKNLDSLYFISKSESMSIFEDTF
PsmAD005_000448800.1 VPLSTLKKLYFDSANFYATYKFLKRDTTTTAALKEKGLLANLKNLYTYVSEKIDKNLDSLYFISKSESMSIFEDTF
PsmAF28_000006200.1 VPLSTLKKLYFDSANFYATYKFLKRDTTTTAALKEKGLLANLKNLYTYVSEKIDKNLDSLYFISKSESMSIFEDTF
PsmAF33_000006700.1 VPLSTLKKLYFDSANFYATYKFLKRDTTTTAALKEKGLLANLKNLYTYVSEKIDKNLDSLYFISKSESMSIFEDTF
PsmAF34_000005900.1 VPLSTLKKLYFDSANFYATYKFLKRDTTTTAALKEKGLLANLKNLYTYVSEKIDKNLDSLYFISKSESMSIFEDTF
PvivaxAM01_000076800.1 VPLSTLKKLYFDSANFYATYKFLKRDTTTTAALKEKGLLANLKNLYTYVSEKIDKNLDSLYFISKSESMSIFEDTF
PvivaxAM02_000474900.1 VPLSTLKKLYFDSANFYATYKFLKRDTTTTAALKEKGLLANLKNLYTYVSEKIDKNLDSLYFISKSESMSIFEDTF
PVL_140006600-t42_1-p1 VPLSTLKKLYFDSANFYATYKFLKRDTTTTAALKEKGLLANLKNLYTYVSEKIDKNLDSLYFISKSESMSIFEDTF

Figure S25 (cont.)

PVX_121920.1-p1	IQPTELSSQASESTTPELKFSEGEEMKLEILTLSGNTTKLDYYKNMKDAYQSVLSIFKYSHGIDEKQRESQKITESANGS
PVP01_1402400.1-p1	IQPTELSSQASESTTPELKFSEGEEMKLEILTLSGNTTKLDYYKNMKDAYQSVLSIFKYSHGIDEKQRESQKITESANGS
Psim2302_000007000.1	-----
Psim3636_000006300.1	-----
PsimAD002_000007200.1	-----
PsimAD005_000448800.1	-----
PsimAF28_000006200.1	-----
PsimAF33_000006700.1	-----
PsimAF34_000005900.1	-----
PvivaxAM01_000076800.1	IQPTELSSQASESTTPELKFSEGEEMKLEILTLSGNTTKLDYYKNMKDAYQSVLSIFKYSHGIDEKQRESQKITESANGS
PvivaxAM02_000474900.1	IQPTELSSQASESTTPELKFSEGEEMKLEILTLSGNTTKLDYYKNMKDAYQSVLSIFKYSHGIDEKQRESQKITESANGS
PVL_140006600-t42_1-p1	IQPTELSSQASESTTPELKFSEGEREMKLEILTLSGNTTKLDYYKNMKDAYQSVLSILKYSHGIDEKQRESQKITESANGS
PVX_121920.1-p1	YLNNKEINEFKGRLNNVKSKQTAISNKIDNATTLHLNLNKIKTDDKNYDTILEKDASEELKRRRDSFNQEMKNTVDGLKL
PVP01_1402400.1-p1	YLNNKEINEFKGRLNNVKSKQTAISNKIDNATTLHLNLNKIKTDDKNYDTILEKDASEELKRRRDSFNQEIKNNTVDGLKL
Psim2302_000007000.1	-----
Psim3636_000006300.1	-----
PsimAD002_000007200.1	-----
PsimAD005_000448800.1	-----
PsimAF28_000006200.1	-----
PsimAF33_000006700.1	-----
PsimAF34_000005900.1	-----
PvivaxAM01_000076800.1	YLNNKEINEFKGRLNNVKSKQTAISNKIDNATTLHLNLNKIKTDDKNYDTILEKDASEELKRRRDSFNQEMKNTVDGLKL
PvivaxAM02_000474900.1	YLNNKEINEFKGRLNNVKSKQTAISNKIDNATTLHLNLNKIKTDDKNYDTILEKDASEELKRRRDSFNQEMKNTVDGLKL
PVL_140006600-t42_1-p1	YLNNKAININEFKGRLNNVKSKQTAISNKIDNATTLHLNLNKIKTDDKNYDTILEKDASEELKRRRDSFNQEMKNTVDGLKL
PVX_121920.1-p1	KEIQEKFNEQVKLLQNLQLETKVSTLNVHEGNATETVKKENTAVDAIQAAAMEGIEKDVVEYINYSYDELLKKGQKIQENQRYTS
PVP01_1402400.1-p1	KEIQEKFNEQVKLLQNLQLETKVSTLNVHEGNATETVKKENTAVDAIQAAAMEGIEKDVVEYINYSYDELLKKGQKIQENQRYTS
Psim2302_000007000.1	-----
Psim3636_000006300.1	-----
PsimAD002_000007200.1	-----
PsimAD005_000448800.1	-----
PsimAF28_000006200.1	-----
PsimAF33_000006700.1	-----
PsimAF34_000005900.1	-----
PvivaxAM01_000076800.1	KEIQEKFNEQVKLLQNLQLETKVSTLNVHEGNATETVKKENTAVDAIQAAAMEGIEKDVVEYINYSYDELLKKGQKIQENQRYTS
PvivaxAM02_000474900.1	KEIQEKFNEQVKLLQNLQLETKVSTLNVHEGNATETVKKENTAVDAIQAAAMEGIEKDVVEYINYSYDELLKKGQKIQENQRYTS
PVL_140006600-t42_1-p1	KEIQEKFNEQVKLLQNLQLETKVSTLNVHEGNVTVETVKKENTAVDAIQAAAMEGIEKDVVEYINYSYDELLKKGQKIQENQRYTS
PVX_121920.1-p1	IRENLTNKIANDSSAINKIKKKAQQYLAYIKNNYNSIYNDGTGLNEYFDTKRLSNHDLTNVQEATRLHIEMSAAVEASEE
PVP01_1402400.1-p1	IRENLTNKIANDSSAINKIKKKAQYELAYIKNNYNSIYNDGTGLNEYFDTKRLSNHDLTNVQEATRLHIEMSAAVEASEE
Psim2302_000007000.1	-----
Psim3636_000006300.1	-----
PsimAD002_000007200.1	-----
PsimAD005_000448800.1	-----
PsimAF28_000006200.1	-----
PsimAF33_000006700.1	-----
PsimAF34_000005900.1	-----
PvivaxAM01_000076800.1	IRENLTNKIANDSSAINKIKKKAQQYLAYIKNNYNSIYNDGTGLNEYFDTKRLSNHDLTNVQEATRLHIEMSAAVEASEE
PvivaxAM02_000474900.1	IRENLTNKIANDSSAINKIKKKAQQYLAYIKNNYNSIYNDGTGLNEYFDTKRLSNHDLTNVQEATRLHIEMSAAVEASEE
PVL_140006600-t42_1-p1	IRENLTNKIANDSSAINKIKKKAQQYLAYIKNNYNSIYNDIGTLNEYFDIKRLSNHDLTNVQEATRLHIEMSAAVEASEE
PVX_121920.1-p1	IIADMKNFEITNTEADISALQNSADRLKSLYSLNLRKQKISINQIYKINLIKLEIKTSANKYMDIAKLFNNVLEAQHKE
PVP01_1402400.1-p1	IIADMKNFEITNTEADISALQNSADRLMSLYSLNLRKQKISINQIYKINLIKLEIKTSANKYMDIAKLFNNVLEAQHKE
Psim2302_000007000.1	-----
Psim3636_000006300.1	-----
PsimAD002_000007200.1	-----
PsimAD005_000448800.1	-----
PsimAF28_000006200.1	-----
PsimAF33_000006700.1	-----
PsimAF34_000005900.1	-----
PvivaxAM01_000076800.1	IIADMKNFEITNTEADISALQNSADRLKSLYSLNLRKQKISINQIYKINLIKLEIKTSANKYMDIAKLFNNVLEAQHKE
PvivaxAM02_000474900.1	IIADMKNFEITNTEADISALQNSADRLKSLYSLNLRKQKISINQIYKINLIKLEIKTSANKYMDIAKLFNNVLEAQHKE
PVL_140006600-t42_1-p1	IIADMKNFEITNTEADISALQNSADRLKSLYSLNLRKQKISINQIYKINLIKLEIKTSANKYMDIAKLFNNVLEAQHKK
PVX_121920.1-p1	LAQDRSKILQAK-----
PVP01_1402400.1-p1	LAQDISKILQAK-----
Psim2302_000007000.1	-----
Psim3636_000006300.1	-----
PsimAD002_000007200.1	-----
PsimAD005_000448800.1	-----
PsimAF28_000006200.1	-----
PsimAF33_000006700.1	-----
PsimAF34_000005900.1	-----
PvivaxAM01_000076800.1	LAQDRSKILQAK-----
PvivaxAM02_000474900.1	LAQDRSKILQAK-----
PVL_140006600-t42_1-p1	LAQDRSKILQVKEKLIINTEKELANLDETITLQSLKKSNELCNSATKNIQDIRELEKENNKEDKKIKIYGEKISHLINRRK

