

Additional Fig. A1. Sequence alignment (FASTA format) of the globin sequences of *P. marinus*.

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>aHb1
-MPIVDS-----GSVPALTAAEKATIRTA
WAPVYAKYQSTGVDILIKFFTSNPAAQAFPPKFQGLTSADQLKKSMDVRWHAERI INAVN
DAVVAMDDTEKMSLKLRELSGKHAKSFQ-VDPQYFKVLAAVIVDTVLP-----GDA
GLEKLMSMICILLRSSY-----
>aHb2a
-MPIVDT-----GSVAPLSAAEKTIRSA
WAPVYSNYETSGVDILVKFFTSTPAAQEFFPKFKGLTTADQLKKSADVRWHAERI INAVN
DAVVSMDDEKMSMKLRDLGKHAKSFQ-VDPQYFKVLAAVIADTVAA-----GDA
GFEKLMSMICILLRSAY-----
>aHb2b
-MPIVDT-----GSVAPLSAAEKTIRSA
WAPVYSNYETSGVDILVKFFTSTPAAQEFFPKFKGLTTADQLKKSADVRWHAERI INAVN
DAVVSMDDEKMSMKLRDLGKHAKSFQ-VDPQYFKVLAAVIADTVAA-----GDA
GFEKLMSMICILLRSAY-----
>aHb2c
-MPIVDT-----GSVAPLSAAEKTIRSA
WAPVYSNYETSGVDILVKFFTSTPAAQEFFPKFKGLTTADQLKKSADVRWHAERI INAVN
DAVVSMDDEKMSMKLRDLGKHAKSFQ-VDPQYFKVLAAVIADTVAA-----GDA
GFEKLMSMICILLRSAY-----
>aHb5a
-MPIVDT-----GSVAPLSAAEKTIRSA
WAPVYSTYETSGVDILVKFFTSTPAAQEFFPKFKGLTTADQLKKSADVRWHAERI INAVN
DAVASMDDEKMSMKLRDLGKHAKSFQ-VDPQYFKVLAAVIADTVAA-----GDA
GFEKLMSMICILLRSAY-----
>aHb5b
-MPIVDS-----GSVAPLSAAEKTIRSA
WAPVYSTYETSGVDILVKFFTSNPAAQEFFPKFKGLTTADQLKKSADVRWHAERI INAVN
DAVASMDDEKMSMKLRDLGKHAKSFQ-VDPQYFKVLAAVIADTVAA-----GDA
GFEKLMSMICILLRSAY-----
>aHb5d
-MPIVDS-----GSVAPLSAAEKTIRSA
WAPVYSTYETSGVDILVKFFTSNPAAQEFFPKFKGLTTADQLKKSADVRWHAERI INAVN
DAVASMDDEKMSMKLRDLGKHAKSFQ-VDPQYFKVLAAVIADTVAA-----GDA
GFEKLMSMICILLRSAY-----
>aHb8
-MPIVDS-----GSVAPLSAAEKTIRSA
WAPVYSNYETSGVDILVKFFTSTPAAQEFFPKFKGLTTADQLKKSADVRWHAERI INAVN
DAVTSMDDEKMSMKLRDLGKHAKSFQ-VDPQYFKVLAAVIADTVAA-----GDA
GFEKLMSMICILLRSAY-----
>aHb3
-MPIVDS-----GSVAPLSAAEKTIRSA
WAPVYSNYETTGV DILVKFFTSTPAAQEFFPKFKGLTTADQLKKSADVRWHAERI INAVN
DAVVSMDDEKMSMKLGDLSGKHAKSFQ-VDPQYFKVLAAVIADTVAA-----GDA
GFEKLMSMICILLRSAY-----
>aHb9
-MPIVDS-----GSVAPLSAAEKTIRSA
WAPVYSNYEEAGKAILIKFFTSNPGVQDFFPKFGLDSADQLSKSAAVRWHAERI INAVN
DAVVALDDPEKLSLKLKALSCKHAQEFN-VDPQYFKVLAVNIVEGVSSANG-GLGAEAQA
AWKFLSQVSILLKSQY-----
>aHb11
-MPIVDS-----GSAGLSAAEKAIITDS
WKVVYADYEAAGKAILIKFFTSNPGVQDFFPKFGLDSADQLSKSAAVRWHAERI INAVN
DAVVALDDPEKQSLKALSCKHAQEFN-VDPQYFKVLSANVLEQVAAANG-GLSAEAQG
AWKLLSIIISILLKSQY-----
>aHb10
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-MPIVDS-----GSVGALSASEKAAVAGS
WKAVYANYEAAGKAVLIKFFTSNPGVQDFFPKFKGLDSADKLSKSPAVRWHAERI INAVN
DSVVALDDPEKQSLKALKALSQKHAYEFH-VDSQYFKVLSATILEQVDDANG-GLSAEGKS
GWEKLLSSICIHLSAY-----

>aHb12

-MPIVDS-----GSVGEFSAAEKSLIVSA
WAPVYAKYEEAGVDILVKFFSDNPGVQDFFPKFKGLDSADQLKKSPAVRWHAERI INAVN
DAVVALDDPPKLSLKLKALSQKHAQELN-VDPQYFKVLAGVISDAVAK-----SGDEKA
AVDKFLSQVVILLKFAY-----

>aHb13

-MPIVDS-----GSVGAI SAAEKSLIVSA
WAPVYAKYEEAGVDILVKFFAANPEAQAFFPKFKGLDSADQLKKSPAVRWHAERI INAVN
DAVVALDDPAKQSLQLKALSQKHAHELN-VDPSYFKVLAGVISDAVAK-----SGDAKA
AVDKFLSQVVILLKSAY-----

>aHb14

-MPIVDS-----GSVGAI SAAEKSLIVSA
WAPVYAKYEEAGVDILVKFFAANPEAQAFFPKFKGLDSADKLLKKSPAVRWHAERI INAVN
DAVVALDDPAKQSLQLKALSQKHAHELN-VDPSYFKVLAGVISDAVAK-----SGDAKA
AVDKFLSQVVILLKSAY-----

>aHb7

-MPIEDT-----GSKPDFSDEEKKAIKDS
WSGVYSEYESASSEILIKFFVDNPSAQDFFPKFKDL DSEEKLNSTAVRWHAERI INAVN
DVIWLLDEPEKNAKLNKELSEKHAVQLN-VDAKFFKVLAE LILDKVAEKSGDSFSDSARS
AWEKLLTYICISLKVAY-----

>aMb1

-MSIADS-----GSAPALSGDEKSAVRDT
WKVVYPHAEDHGTTILIKFLTENADAKFFPKFQALKTADEMKSSPVL RDHAKRIMNS IN
DMVVALDDTNAQNAQMNGLSKKHANDFK-VDPKYFKVISNVILSVIAEGLGAQFNDAAKN
GWSKLLTTTCIGLKSFAF-----

>aMb2

MSAIVDS-----GSAPALSGDEKAAIKST
WPSVFKAEDVGAEMLSRFISSNADVKKYFPKFKDISSQAE LKSSAKVRDHAKRIMAF IN
DLVDNIDNAGAQTAKLHLSLSAEHAEKFK-VDPQYFKVISNVLLDILGETFGASFSGATRS
AWIKLLSIICIGLRSFAF-----

>aHb6

MGALQDS-----GIVSSFKEDEKAALRES
WDIFNNSHQDAGVKILARFI INNPEAKKFFPKFKGLNTAEELQNSAEVRIHGDKILAAVQ
QAVLDLDDPKQKNKLDLSKSHAQQFN-VEPAYFKTFAEVILKYVTETTCGKSFTSEMRT
SWSKLLSLIIIEELQSAY-----

>Cygb

-----MEQGWLSEEEIEALQDI
WEKVFKSAEDVGVILLVRLFTGHPASKQYFPMFKDLETADDLKASAKLRWHAGRVMGSLD
KAVRSLRKPEELIKILRAVGLSHARKATPVDVYYHILGGIIMDV LLETFKDELSPTARS
AWTKLLGTLCTEFENAYREE-----GVLEQAAA

>GbX1

MGCTVSTDERTGAQSSSQGQSASRKQQQPEQQRAAGEGHQPPGPPQAPSESQRRLVDRS
WLALQCDIARVGVIMFVRLFETHPECKDVFYQFRDCEDLQK LKMNKQLQAHGLRVMSFIE
KSVARLEQECVLEQLIVEMGRKH-YKYN-ASPKYYSFVGIEFIATVQPFLQEKWTNEVED
AWQCLFRYIAAVMKRGYLEEEEAASNGVNTANYDRGQGNHGATAM