

1 **Supplementary Data 1.** Diversity of VDJ gene usage for PvRBP2b human mAbs.

2 **Supplementary Data 2.** HDX data table showing for each peptide analyzed and for PvRBP2b  
3 alone or in complex with PvRBP2b mouse antibodies 3E9, 6H1 and 10B12: i) deuteration  
4 levels expressed as number of deuterons (# D) and ii) percentage deuteration calculated based  
5 on a maximal theoretical deuteration level of 85 % (% D). On the right, differences in  
6 deuteration levels for between PvRBP2b alone or in presence of any of the mouse antibodies  
7 for each peptide are shown. Differences are calculated both in percentage and number of  
8 deuterons.

9 **Supplementary Data 3.** HDX data table showing for each peptide analyzed and for PvRBP2b  
10 alone or in complex with PvRBP2b human mAbs: i) deuteration levels expressed as number of  
11 deuterons (# D) and ii) percentage deuteration compared to a highly deuterated sample (% D).  
12 Standard-deviation for each of the triplicate measurements are shown.

13 **Supplementary Data 4.** Differences in HDX levels for all analysed peptides between  
14 PvRBP2b alone and in complex with PvRBP2b human mAbs. Values are expressed as number  
15 of deuterons incorporated.

16 **Supplementary Data 5.** Differences in HDX levels for all analysed peptides between  
17 PvRBP2b alone and in complex with PvRBP2b human mAbs. Values are expressed as  
18 percentage peptide deuteration.