SUPPLEMENTAL DATA

	Loop _ α-helix 1		
	51 53 59 61		
Human	AESHLSLLYHLTAVSSPAPGTPAFWVSGWLGPQQYLSYNSLRGEAEPCGAWVWENQVSWYWEKETTDLRIKEKLFLEAFKALGGKGP	87	
Chimpanzee	AESHLSLLYHLTAVSSPAPGTPAFWVSGWLGPQQYLSYNSLRGEAEPCGAWVWENQVSWYWEKETTDLRIKEKLFLEAFKALGGKGP	87	
Macaque	AESHLSLLYHLTAVSSPAPGTPAFWVSGWLGPQQYLSYDSLRGQAEPCGAWVWENQVSWYWEKETTDLRIKEKLFLEAFKALGGKGP	87	
Sheep	AENHRSLQYHFTAVSAPAAGTPAFWVSGWLGPQQYLSYNNLRAQAEPYGAWVWESQVSWYWEKETTDLRNQEKLFLQALQVLGEGP	86	
Cattle	AENYRSLQYHFTAVSALAAGTPAFWVSGWLGPQQYLSYNNLRAQAEPYGAWVWESQVSWYWEKETMDLRNQETLFLEALQALGEGP	86	α1
Pig	ADNHRSLLYHLTAVSAPTPGAPAFWVSGWLGPQQYLSYNNLRAQAEPYGAWVWESQVSWYWEKETADLRNKQKLFLEALKTLEEGGP	87	α
Dog	ADSHLSLLYHLTAVSAPPPGTPAFWASGWLGPQQYLSYNNLRAQAEPYGAWVWENQVSWYWEKETTDLRTKEGLFLEALKALGDGGP	87	
Rabbit	AGSHLSLLYHITAVTDPHGGTPSFFVSGWLGPQQYLSYSNRRSEAEPYGAWIWESQVSWYWEKETVDLKNKQQLFLEALEVLGEGP	86	
Rat	AEPRLPLMYHLAAVSDLSTGLPSFWATGWLGAQQYLTYNNLRQEADPCGAWIWENQVSWYWEKETTDLKSKEQLFLEAIRTLENQINGT	89	
Mouse	SETRPPLMYHLTAVSNPSTGLPSFWATGWLGPQQYLTYNSLRQEADPCGAWMWENQVSWYWEKETTDLKSKEQLFLEALKTLEKILNGT	89	
Consensus	· · · * **::**: * *:*::****.****:* * :*:* ***:**.********		
	α-helix 2		
	115 116 161 166		
Human	YTLQGLLGCELGPDNTSVPTAKFALNG <mark>EE</mark> FMNFDLKQGTWGGDWPEALAISQRWQQQDKAANKELTFLLFSCPHRLREHLERGRGNLEWK	177	
Chimpanzee	YTLQGLLGCELGPDNTSVPTAKFALNG <mark>EE</mark> FMNFDLKQGTWGGDWPEALAISQRWQQQDKAANKELTFLLFSCPHRLREHLERGRGNLEWK	177	
Macaque	YTLQGLLGCELSPDNTSVPTAKFALNG <mark>EE</mark> FMNFDLKQGTWGGDWPEALAISQRWQQQDKAANKELTFLLFSCPHRLREHLERGRGNLEWK	177	
Sheep	FTLQGLLGCELGPDNVSVPVAKFALNG <mark>EE</mark> FMMFDPKLGIWDGDWPESRTVSIQWTKQPEAVNKEKTFLLYSCPHRLLGHLERGRGNLEWK	176	
Cattle	FTMQGLLGCELGPDNVSVPVAKFALNG <mark>EE</mark> FMMFDPKLGIWDGDWPESRTVSIKWTQQPEAVNKEKTFLLYSCPHRLLGHLERGRGNLEWK	176	α2
Pig	FTLQGLLGCELGPDNVSVPVATFALNG <mark>EE</mark> FMKFDTKLGTWDGEWPEARTIGSKWMQEPDAVNKEKTFLLYSCPHRLLGHLERGRGNLEWK	177	uΖ
Dog	YTLQGLLGCELGPDNTSVPVAKFALNG <mark>ED</mark> FMTFDPKLGTWNGDWPETETVSKRWMQQAGAVSKERTFLLYSCPQRLLGHLERGRGNLEWK	177	
Rabbit	YTLQGLLGCELGPDNASVPTAKFALNG <mark>ED</mark> FMSFDPKQGSWAGEWPEALRISTRWQQQAEAVSKERTFLLTSCPQRLLGHLERGRGNLEWK	176	
Rat	FTLQGLLGCELAPDNSSLPTAVFALNG <mark>EE</mark> FMRFNPRTGNWSGEWPETDIVGNLWMKQPEAARKESEFLLTSCPERLLGHLERGRQNLEWK	179	
Mouse	YTLQGLLGCELASDNSSVPTAVFALNG <mark>EE</mark> FMKFNPRIGNWTGEWPETEIVANLWMKQPDAARKESEFLLNSCP <mark>E</mark> RLLGHLERGRRNLEWK	179	
Consensus	:*:********* *:*.* ******:** *: : * * *:***: :. * :: *. ** *** *		
Human	EPPSMRLKARP-SSPGFSVLTCSAFSFYPPELQLRFLRNGLAAGTGQGDFGPNSDGSFHASSSLTVKSGDEHHYCCIVQHAGLAQPLRVEL		
Chimpanzee	$\tt EPPSMRLKARP-SSPGFSVLTCSAFSFYPPELQLRFLRNGLAAGTGQGDFGPNSDGSFHASSSLTVKSGDEHHYCCIVQHAGLAQPLRVEL$		
Macaque	$\tt EPPSMRLKARP-GNPGFSVLTCSAFSFYPPELQLRFLRNGMAAGTGQGDFGPNSDGSFHASSSLTVKSGDEHHYCCIVQHAGLAQPLRVEL$		
Sheep	$\tt EPPSMRLKARP-SSPGLSVLTCSAFSFYPPELKLHFLRNGLAIGSGEIDMGPNGDGSFYAWSSLTVKSGDEHHYRCVVQHAGLAQPLTVEL$		α3
Cattle	$\tt EPPSMRLKARP-GSPGFSVLTCSAFSFYPPELKLRFLRNGLAIGSGEIDMGPNGDGSFYAWSSLTVKSGDEHHYRCVVQHAGLAQPLTVEL$		uJ
Pig	${\tt EPPSMRMKARPGTAPGFSvLTCIAFSFYPPELQLRFLRNGLAAGSGESDIGPNGDGSFHAWSSLTVKSGDEHHYCCVVQHAGLAQPLTVEL}$		
Dog	${\tt EPPSMRLkARP-GSPGFSVLTCSAFSFYPPELQLRFLRNGLAAGSGEGDFGPNGDGSFHAWSSLTVKSGDEHHYRCLVQHAGLPQPLTVELgebreak and an and an anti-anti-anti-anti-anti-anti-anti-anti-$		
Rabbit	EPPSMRLKARP-GPPGFSVLTCSAFSFYPPELQFGFLRNGMAAGSGEGGFGPNGDGSFYAWASLSVRSGDEYRYSCVVRHAGL9QPLSVAL		
Rat	EPPSMRLKARP-GNSGSSVLTCAAFSFYPPELKFRFLRNGLASGSGNCSTGPNGDGSFHAWSLLEVKRGDEHHYQCQVEHEGLAQPLTVDL		
Mouse	EPPSMRLKARP-GNSGSSVLTCAAFSFYPPELKFRFLRNGLASGSGNCSTGPNGDGSFHAWSLLEVKRGDEHHYQCQVEHEGLAQPLTVDL ************************************		
Consensus	******:**** .* ***** ********:: *****:* *:*: . ***.***:*: * *: * *: ***::* * *.* **.*** * *		
Human	ESPAKSSVLVVGIVIGVLLLTAAAVGGALLWRRMRSGLPAPWISLRGDDTGVLLPTPGEAQDADLKDVNVIPATA 342		
Chimpanzee	ESPAKSSVLVVGIVIGVLLLTAAAVGGALLWRRMRSGLPAPWISLRGDDTGVLLPTPGEAODADLKDVNVIPATA 342		
Macaque	ETPAKSSVLVVGIVIGVLLLTAAAVGGALLWRRMRSGLPAPWISLRGDDTGSLLPTPGEADADSKDINVIPATA 342		
Sheep	ESPARTSMPVVGIVIGFFLLLTVAAGGALLWRRMRKGLPASWISFRGEDVGALLPTPGLSKDGES 331		
Cattle			
Pig	ESPAKSSMPVVGIMVGFLLLLIVAGGGALLWRRMRKGLPAPWISFHGDDVGALLPTPDLAKDAES 333	ТΜ	+CT
Dog	ESPAKSSVPVVGIVIGFLLLTAVAVGGALLWRRMRKGLPAPWMSLRGDDVGALLPTPGVPKDADS 332		
Rabbit	DWPAOSSVTVAGIVVGVLLLVAVAAGAALAWRR-RRGLPAPWVFLRGDDIRTLLPODEGPODVSAFPATA 335		
Rat	DSPARSSVPVVGIILGLLLVVVAIAGGVLLWNRMRSGLPAPWLSLSGDDSGDLLPGGNLPPEAEPOGVNAFPATS 344		
Mouse	DSSARSSVPVVGIVLGLLLVVVAIAGGVLLWGRMRSGLPAPWLSLSGDDSGDLLPGGNLPPEAEPOGANAFPATS 344		
Consensus	· .*::*: *.**::*: . ** * * * ****.*: : *:* *** .: · · · · · · · · · · · · · · · · · ·		

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Figure S1. Alignment of the amino acid sequences of FcRn HC from multiple species.

CLUSTAL W was used to align the amino acid sequences from human (NP_001129491), chimpanzee (XP_512822), macaque (AAL92101), sheep (NP_001116875), cattle (NP_788830), pig (NP_999362), dog (XP_533618), rabbit (ABY47597), rat (NP_203502) and mouse FcRn (NP_034319) using the BLOSUM matrix. The gap open penalty was set to 10, and the gap extension penalty to 0.05. The conserved tryptophans in the α 1-domain are marked in red, the glutamic acid residues important for IgG binding in yellow, the histidines within the α 2-domain involved in albumin binding are shown in light blue while Gln161/Gln160 of dog and rabbit, and Glu163 of mouse and rat are shown in purple and orange, respectively.

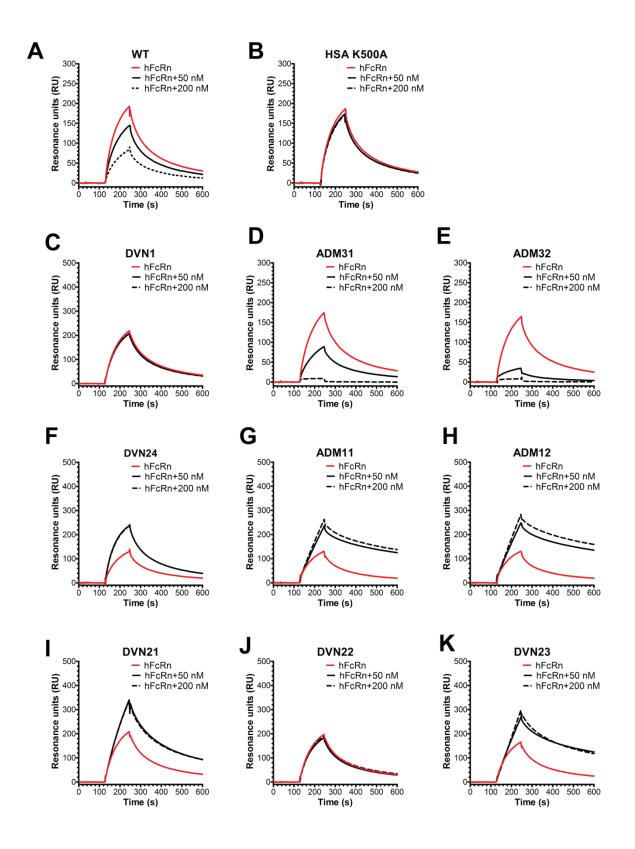


Figure S2. Competitive SPR binding analysis of hFcRn to HSA in the presence of HSA, HSAK500A or anti-FcRn Abs.

Representative SPR sensorgrams showing binding of 200 nM of hFcRn injected alone or in the presence of 50-200 nM of (A) WT HSA, (B) HSA-K500A or (C-K) monoclonal Abs as indicated over immobilized WT HSA (1500 RU) at pH 6.0. All injections were done at 25°C with a flow rate of 50 μ l/min.