

**Table S1.** List of hCG $\beta$  homologs used for the analysis of the hCG $\beta$  positional amino acid variability.

Seq. no.	Species	Protein	Accession no. (NCBI)
1	<i>Homo sapiens</i>	CG $\beta$	NP_149032.1
2	<i>Homo sapiens</i>	LH $\beta$	NP_000885.1
3	<i>Papio anubis</i>	CG $\beta$	NP_001106126.1
4	<i>Macaca fascicularis</i>	LH $\beta$	Q6EV78.1
5	<i>Nomascus leucogenys</i>	PREDICTED: CG $\beta$	XP_003269724.1
6	<i>Felis catus</i>	LH $\beta$	NP_001009277.1
7	<i>Bos taurus</i>	PREDICTED: LH $\beta$	NP_776355.1
8	<i>Equus asinus</i>	LH $\beta$ /CG $\beta$	P19794.2
9	<i>Octodon degus</i>	LH $\beta$	BAE95638.1
10	<i>Microtus montebelli</i>	LH $\beta$	BAE95634.1
11	<i>Cavia porcellus</i>	LH $\beta$	NP_001166301.1
12	<i>Aotus nancymae</i>	CG $\beta$	Q3HRV3.1
13	<i>Callithrix jacchus</i>	PREDICTED: CG $\beta$	XP_002762382.1
14	<i>Callicebus moloch</i>	CG $\beta$	AAL69731.1
15	<i>Saimiri boliviensis boli</i>	CG $\beta$	Q3S2X5.1
16	<i>Cebus apella</i>	CG $\beta$	CAQ52837.1
17	<i>Hypophthalmichthys nobilis</i>	LH $\beta$	ABQ42715.1
18	<i>Clarias gariepinus</i>	CG $\beta$	P53543.1
19	<i>Conger myriaster</i>	CG $\beta$	BAB97391.1
20	<i>Danio rerio</i>	LH $\beta$	NP_991186.1
21	<i>Oncorhynchus tshawytscha</i>	CG $\beta$	P07732.1
22	<i>Clupea harengus</i>	CG $\beta$	Q9YGH2.1
23	<i>Plecoglossus altivelis</i>	CG $\beta$	AAM92270.1
24	<i>Acipenser baerii</i>	LH $\beta$	CAB93502.1
25	<i>Takifugu niphobles</i>	LH $\beta$	BAJ12080.1
26	<i>Oreochromis niloticus</i>	LH $\beta$	AAP49576.1
27	<i>Amphiprion melanopus</i>	LH $\beta$	ACR08088.1
28	<i>Pagrus major</i>	CG $\beta$	BAB18564.1
29	<i>Hippoglossus hippoglossus</i>	LH $\beta$	CAD10502.1
30	<i>Odontesthes bonariensis</i>	LH $\beta$	AAP85607.3
31	<i>Gasterosteus aculeatus</i>	LH $\beta$	CAD59185.1
32	<i>Periophthalmus modestus</i>	LH $\beta$	BAF43300.1
33	<i>Mauremys reevesii</i>	LH $\beta$	BAB92949.1
34	<i>Alligator mississippiensis</i>	LH $\beta$	BAJ14507.1
35	<i>Scyliorhinus canicula</i>	LH $\beta$	CAC43236.1
36	<i>Cynops pyrrhogaster</i>	LH $\beta$	BAB92959.1
37	<i>Neoceratodus forsteri</i>	LH $\beta$	CAE17335.1