

Table S1

	Standard concentrations			
	2.5 (ng/ml)	5.0 (ng/ml)	10 (ng/ml)	20.0 (ng/ml)
NE	1.79	2.58	1.39	0.51
DA	0.34	7.10	5.32	2.88
5-HT	1.48	3.84	0.10	0.34

Table S1: Percentage relative standard deviation (RSD%) obtained from analysis of standard solutions of norepinephrine (NE), dopamine (DA) and serotonin (5-HT).

Table S2

NE, DA, 5-HT	1.25 (ng/ml)	3.75 (ng/ml)	11.00 (ng/ml)	15.00 (ng/ml)
	Resulting concentration calculated by linear regression curve			
NE, DA, 5-HT	1.25, 1.24, 1.24	3.93, 3.85, 3.84	10.99, 11.25, 10.97	15.08, 15.03, 15.18
	Percentage variation			
NE, DA, 5-HT	0, 0.8, 0.8	-4.8, -2.7, -2.4	0.1, -2.3, 0.3	-0.5, -0.2, -1.2

Table S2: Mean percentage variations of standard solutions of norepinephrine (NE), dopamine (DA) and serotonin (5-HT), at four different concentrations calculated by linear regression curve.

Table S3

		Sample dilution	RSD%	Mean concentration (ng/ml)	Recovery %
NE	LOQ	1:50	7.42	0.935	98.92
NE	LOD	1:100	75.74	0.408	86.28
DA	LOQ	1:15	0.11	1.228	98.40
DA	LOD	1:30	27.13	0.690	111.01
5-HT	LOQ	1:100	3.62	1.295	101.27
5-HT	LOD	1:200	23.50	0.561	87.76

Table S3: The limits of quantitation (LOQ) and detection (LOD) of norepinephrine (NE), dopamine (DA) and serotonin (5-HT) were determined by analyses performed in triplicate on hypothalamic homogenate serially diluted in mobile phase. The LOQ is defined, for each analyte, as the lowest concentration showing a percentage relative standard deviation (RSD%) ≤ 10 .

Table S4

		DA	NE	5-HT
10 ng/ml	RSD%	2.74	1.92	1.61
	Mean concentration (ng/ml)	9.57	9.24	9.81
10.5 ng/ml	RSD%	1.07	1.89	1.52
	Mean concentration (ng/ml)	10.42	10.39	10.30
11 ng/ml	RSD%	1.02	0.48	0.65
	Mean concentration (ng/ml)	11.27	11.26	11.29

Table S4: Sensitivity analysis, performed by five injections of three standard solutions of norepinephrine (NE), dopamine (DA) and serotonin (5-HT), reveals that our method discriminates concentration differences of magnitude 0.5 ng/ml, with a percentage relative standard deviation (RSD%) ≤ 10 .

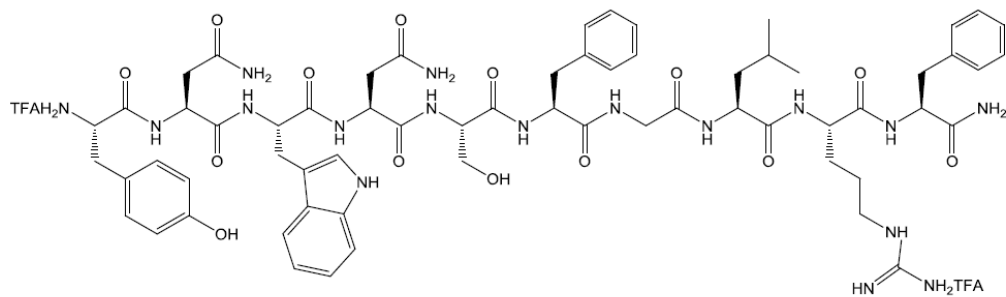


Figure S1: Structure of Kisspeptin-10.

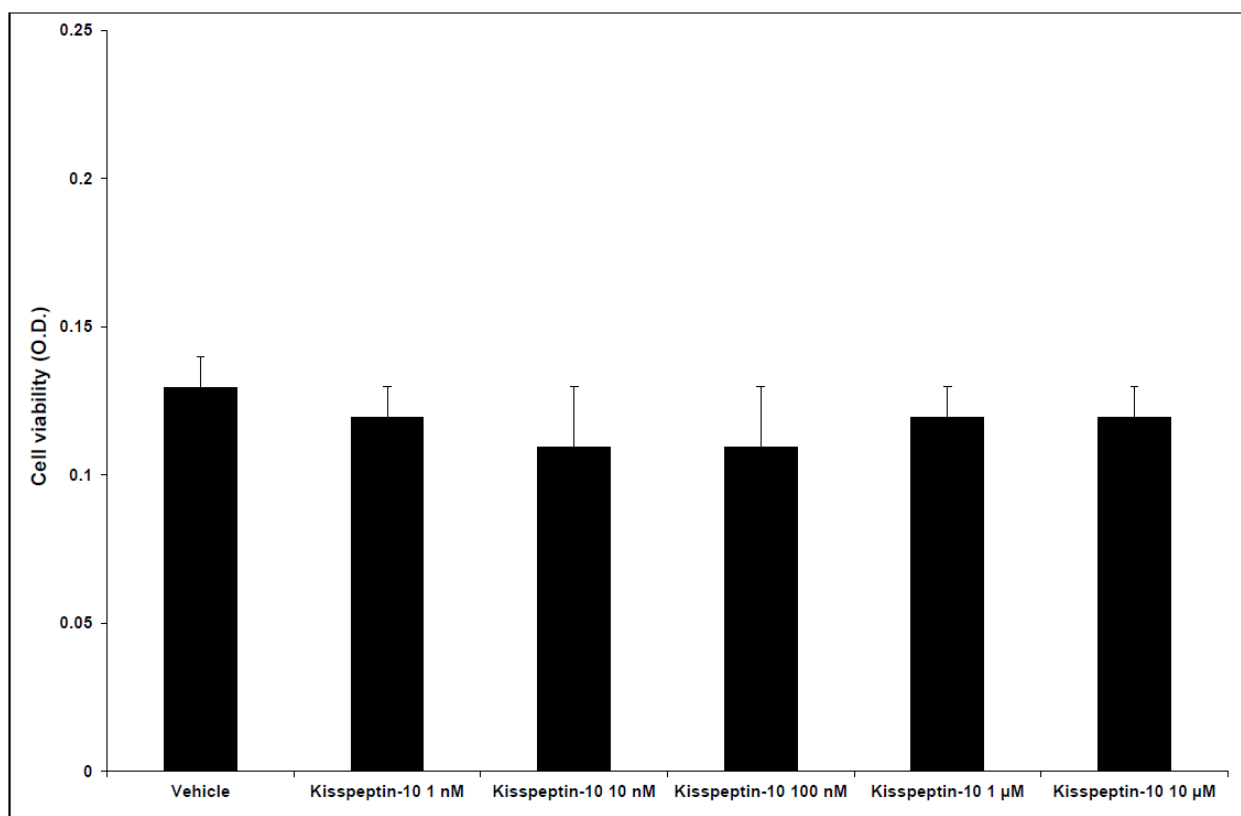
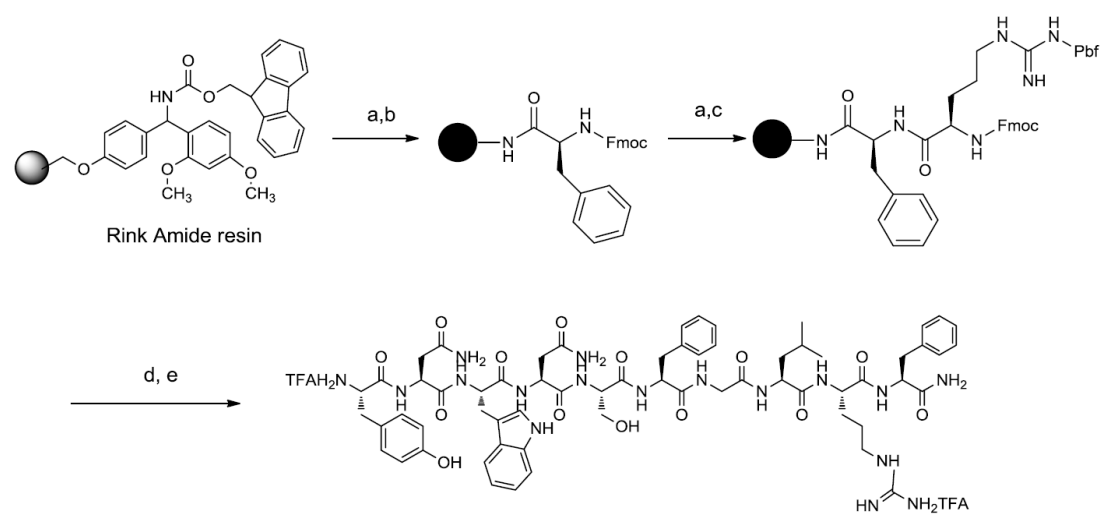


Figure S2: Effect of Kisspeptin-10 1nM-10 μM on hypothalamic hypoE22 cell line (MTT viability test).



Scheme S1: Synthesis of Kisspeptin-10. Reagents and conditions: a. Piperidine 20% in DMF; b. Fmoc-Phe-OH, HOBt/TBTU, DIPEA, DMF; c. Fmoc-Arg(Pbf)-OH, HOBt/TBTU, DIPEA, DMF; d. cycles of Fmoc-deprotection/repeated couplings; e. TFA/H₂O/TIPS 95:2.5:2.5.