

Rat NT-proBNP ELISA

for the quantitative determination of rat N-terminal pro-brain natriuretic peptide (NT-proBNP) in serum or plasma

Cat. No. BI-1204R, 12 x 8 tests

FOR RESEARCH USE ONLY

SAMPLE VALUES

Rat NT-proBNP Values in Apparently Healthy Animals

To provide an estimation of rat NT-proBNP values from apparently healthy rats we measured a small sample number of rat serum/plasma samples deriving from rat strains with different genetic backgrounds. Rat NT-proBNP reference values may differ from other rat strains.

A summary of the results is shown below:

Sample matrix	n*	Rat NT-proBNP (pg/ml)				Detectable (%)
		Mean	Median	Minimum	Maximum	
Serum	6	82	74	0	169	83
Plasma **	14	47	22	0	185	86

* samples derived from rat strains with different genetic backgrounds.

Rat NT-proBNP reference values may differ between strains.

**EDTA and Citrate plasma

It is recommended to establish the normal range for each laboratory.

Rat NT-proBNP Values in a Clinical Cohort (rat models)

Rat NT-proBNP levels were measured in rats from the respective control groups and in rats from kidney disease models adriamycin nephropathy (AN) and renal mass reduction (RMR).

Summary of rat NT-proBNP values in rats (control group /AN)

Cohort	n	Rat NT-proBNP (pg/ml)			
		Mean	Median	Minimum	Maximum
Control group	5	335	379	270	405
AN	8	712	706	490	922

Detailed data:

ID	Rat NT-proBNP (pg/ml)	
	Control group	AN
#1	384	788
#2	379	623
#3	270	490
#4	405	688
#5	237	840
#6	n.a.	922
#7	n.a.	723
#8	n.a.	624

n.a.=not available

Summary of rat NT-proBNP values in rats (control group/RMR):

Cohort	n	Rat NT-proBNP (pg/ml)			
		Mean	Median	Minimum	Maximum
Control group	4	108	110	45	169
RMR	7	767	708	275	1724

Detailed data:

ID	Rat NT-proBNP (pg/ml)	
	Control group	RMR
#1	90	275
#2	129	587
#3	45	797
#4	169	814
#5	n.a.	708
#6	n.a.	463
#7	n.a.	1724

n.a.=not available

Rat NT-proBNP ASSAY CHARACTERISTICS Summary

Method	Sandwich ELISA, HRP/TMB, 12x8-well detachable strips				
Sample type	Serum and plasma				
Sample volume	10 µl / well				
Assay time	2 hours / 1 hour / 30 min				
Sensitivity	LOD: 21pg/ml, LLOQ: 50pg/ml				
Standard range	0 – 3200 pg/ml (0 / 100 / 200 / 400 / 800 / 1600 / 3200)				
Precision		n	Average %CV		
	Within-run	3	≤6		
	In-between-run	9	≤4		
Accuracy		n	Average %recovery		
			+1600 pg/ml	+400 pg/ml	
	Rat serum	6	90	86	
	Rat plasma	3	88	81	
Dilution linearity of endogenous rat NT-proBNP		n	Average % of expected dilution		
			1+1	1+3	1+7
	Rat serum	5	106	116	113
Specificity	Endogenous and recombinant rat NT-proBNP				
Use	Research use only				
Values of healthy animals*		n	Median NT-proBNP (pg/ml)		
	Rat serum	6	74		
	Rat plasma	14	22		
Values in CTRL group - disease model AN	Rat serum	5	379		
Values in disease model AN	Rat serum	8	706		
Values in CTRL group - disease model RMR	Rat serum	4	110		
Values in disease model RMR	Rat serum	7	708		

* values derive from from rat strains with different genetic backgrounds
 Abbreviations: CTRL: control; AD: Adriamycin Nephropathy; RMR: renal mass reduction