

## Periostin Mouse ELISA (Cat.No. BI-20433MS)

for the quantitative determination of  
mouse Periostin in serum and plasma samples  
Cat. No. BI-204033MS . 12 x 8 tests

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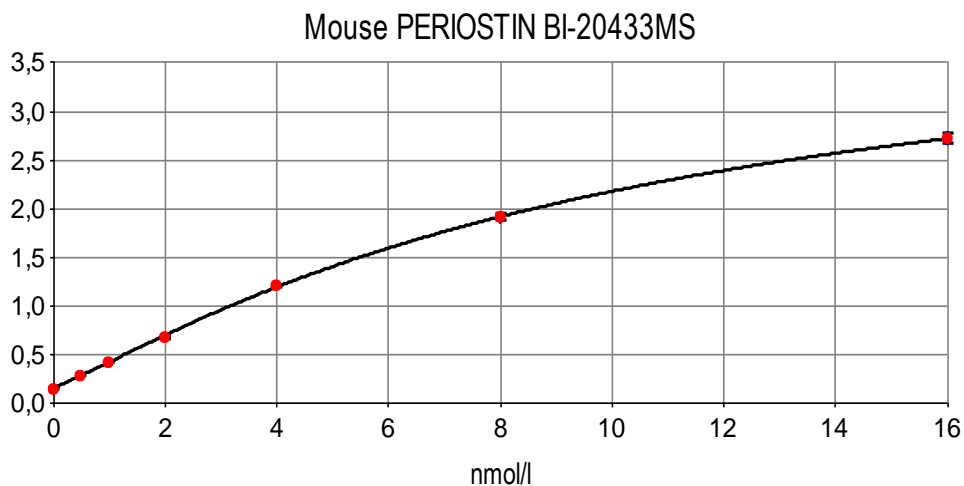
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## ASSAY CHARACTERISTICS SUMMARY

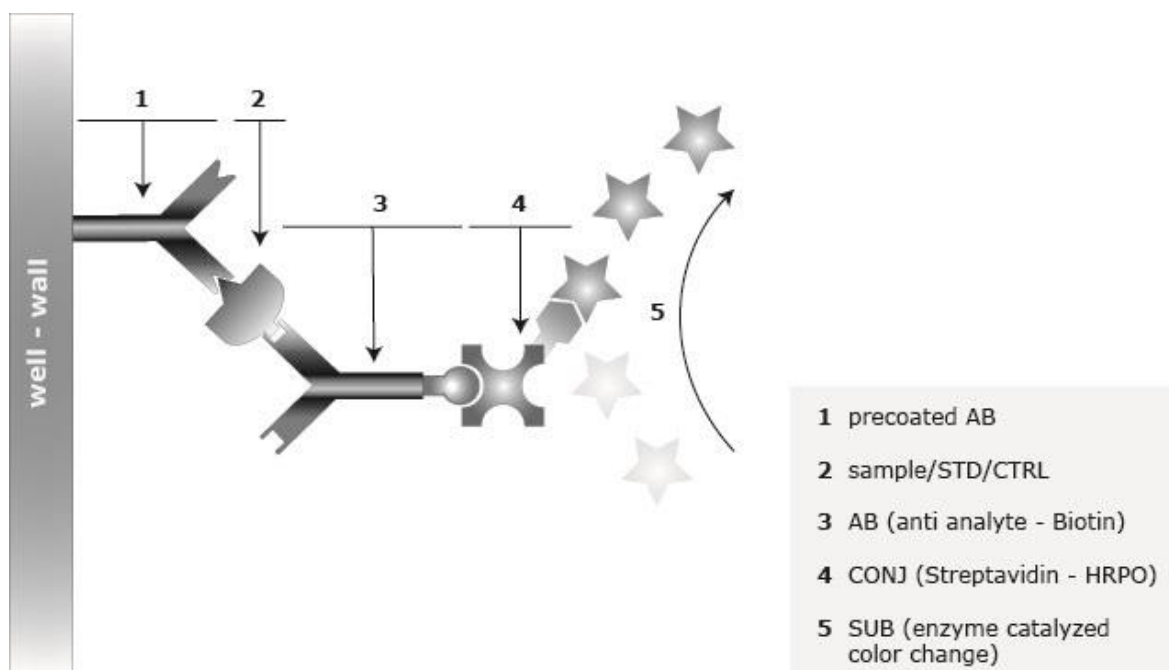
<b>Method</b>	Sandwich ELISA, HRPO/TMB, 12x8-well strips			
<b>Sample type</b>	Mouse serum, plasma Protocol for cell culture samples on request.			
<b>Standard range</b>	0-16 nmol/l (0 / 0.5 / 1 / 2 / 4 / 8 / 16)			
<b>Conversion factor</b>	1 ng/ml = 0.011 nmol/l 1 nmol/l = 90.115 ng/ml			
<b>Sample volume</b>	≤ 5µl / sample			
<b>Incubation time &amp; temp.</b>	3 h / 1 h / 30 min – room temperature			
<b>Sensitivity</b>	LOD (0 nmol/l + 3 SD): 0.003 nmol/l; LLOQ: 0.125 nmol/l			
<b>Specificity</b>	This assay detects recombinant and endogenous mouse Periostin.			
<b>Precision</b>	Intra-assay (n=5) ≤ 6%, Inter-assay (n=15) ≤ 6%			
<b>Spike/Recovery (average recovery spiked with 1,6 and 8 nmol/l recombinant mouse Periostin, respectively)</b>	Mouse serum (n=4): 72%, 97%			
	Mouse plasma (n=4): 86%, 88%			
<b>Dilution linearity of recombinant and endogenous mouse Periostin (average recovery of expected Periostin values after a 1+1; 1+3; 1+7 dilution with assay buffer)</b>	Recovery (%):	Mouse Periostin rec. / endogenous		
	Dilution:	1+1	1+3	1+7
	Mouse serum (n=4)	120 / 116	117 / 113	111 / *
	Mouse plasma (n=4)	113 / 128	102 / 130	93 / *
<b>Periostin values from various mouse samples:</b>	Adult mice (n=28): 3.4 ± 0.9 nmol/l 4-week old mice (n=24): 8.1 ± 1.0 nmol/l Female mice, 4-week old (n=13): 7.9 ± 1.2 nmol/l Male mice, 4-week old (n=11): 8.4 ± 0.7 nmol/l			

\*not detectable

## TYPICAL STANDARD CURVE



## PRINCIPLE OF THE ASSAY



CAB (coating antibody) monoclonal mouse IgG  
DAB (detection antibody) polyclonal goat IgG  
AG (antigen) mouse Periostin protein

## SAMPLE VALUES

### **PERIOSTIN VALUES OF "NORMAL" CONTROL MOUSE SERUM SAMPLES:**

Samples Mouse serum	n	Periostin [nmol/l]
Adult mice	28	3.4 ± 0.9
4-week old mice	24	8.1 ± 1.0
Female, 4-week old mice	13	7.9 ± 1.2
Male, 4-week old mice	11	8.4 ± 0.7

### **Adult vs. 4-week old mice:**

Mouse Periostin [nmol/l]	adult	4-weeks old
Number of serum samples	28	24
Minimum	1.6	5.3
<b>Median</b>	<b>3.35</b>	<b>8.3</b>
Maximum	5.4	10.1
5% Percentile	1.87	5.575
95% Percentile	5.31	10.08
<b>Mean</b>	<b>3.468</b>	<b>8.171</b>
Std. Deviation	0.9341	1.063

### **Female vs. male, panel: 4-week old mice**

Mouse Periostin [nmol/l]	female	male
Number of serum samples	13	11
Minimum	5.3	7.6
<b>Median</b>	<b>8</b>	<b>8.4</b>
Maximum	10	10.1
<b>Mean</b>	<b>7.908</b>	<b>8.491</b>
Std. Deviation	1.245	0.7327

### **MATRIX COMPARISON SERUM VS. PLASMA LEVELS IN ADULT MOUSE SAMPLES:**

Mouse Periostin [nmol/l]	serum	plasma
Number of serum samples	28	5
Minimum	1.6	1,3
<b>Median</b>	<b>3.35</b>	<b>2.5</b>
Maximum	5.4	2.9
<b>Mean</b>	<b>3.468</b>	<b>2.4</b>
Std. Deviation	0.9341	0.6403

## ASSAY PERFORMANCE CHARACTERISTICS

### RECOVERY

Recovery of mouse Periostin in mouse samples was evaluated. The spiked samples were diluted 1+200 as indicated in the package insert.

Summary

Matrix	n	Mouse Periostin (+1.6 nmol/l)		Mouse Periostin (+8 nmol/l)	
		Mean	Range	Mean	Range
Mouse serum	4	72%	60-86%	97%	88-107%
Mouse plasma	4	86%	67-96%	88%	70-100%

#### Spike recovery experiments in mouse samples

Recovery of spiked samples was tested by adding mouse recombinant Periostin to mouse serum samples. The spiked samples were diluted 1+200 as indicated in the package insert.

Data showing spike/recovery of mouse serum samples:

Sample ID	Spike mouse Periostin [nmol/l]			S/R [%]	
	0	1.6	8	1.6	8
#MS1	1.7	2.7	7.8	79	88
#MS2	4.1	4.7	9.2	60	89
#MS3	3.4	4.0	10.2	64	107
#MS4	2.5	3.6	9.7	86	105
<b>Mean S/R [%]</b>				<b>72</b>	<b>97</b>

Data showing spike/recovery of mouse plasma samples:

Sample ID	Spike mouse Periostin [nmol/l]			S/R [%]	
	0	1.6	8	1.6	8
#MP1	2.9	3.6	7.0	67	70
#MP2	3.2	4.4	8.4	96	85
#MP3	2.6	3.7	9.1	85	98
#MP4	3.2	4.4	9.6	96	100
<b>Mean S/R [%]</b>				<b>86</b>	<b>88</b>

### DILUTION LINEARITY

Dilution linearity was assessed in mouse samples containing endogenous and recombinant mouse Periostin.

Summary of dilution linearity of samples spiked with recombinant mouse Periostin:

matrix	R of dilution steps [%]		
	1+1	1+3	1+7
serum	120	117	111
plasma	113	102	93

Summary of dilution linearity of endogenous mouse Periostin:

matrix	R of dilution steps [%]	
	1+1	1+3
serum	116	113
plasma	128	130

## Experiments

Dilution linearity of the recombinant analyte:

Dilution linearity was assessed by diluting spiked mouse serum and plasma samples 1+1, 1+3, 1+7 with assay buffer. The sample preparation was performed according to the assay protocol.

Data showing the dilution of recombinant mouse Periostin in mouse serum samples

Sample ID	+8 nmol/l mouse Periostin				R [%]		
	ref	1+1	1+3	1+7	1+1	1+3	1+7
#MS1	10.1	6.8	3.3	1.5	135	130	118
#MS2	10.1	6.0	2.8	1.2	118	110	97
#MS3	11.5	6.6	3.3	1.6	115	114	112
#MS4	11.7	6.5	3.4	1.7	111	115	115
<b>Mean R [%]</b>					<b>120</b>	<b>117</b>	<b>111</b>

Data showing the dilution of recombinant mouse Periostin in mouse plasma samples

Sample ID	+8 nmol/l mouse Periostin				R [%]		
	ref	1+1	1+3	1+7	1+1	1+3	1+7
#MP1	7.4	4.2	2.0	0.9	113	106	96
#MP2	8.2	4.5	2.1	0.9	110	99	89
#MP3	7.6	4.6	1.9	0.9	120	99	96
#MP4	8.1	4.4	2.1	0.9	109	106	91
<b>Mean R [%]</b>					<b>113</b>	<b>102</b>	<b>93</b>

Dilution linearity of the endogenous analyte

Dilution linearity was assessed by diluting mouse serum and plasma samples 1+1, 1+3, with assay buffer. The sample preparation was performed according to the assay protocol.

Data showing the dilution of *endogenous* mouse Periostin in mouse serum

Sample ID	mouse Periostin [nmol/l]			R [%]	
	ref	1+1	1+3	1+1	1+3
#MS1	1.7	0.9	0.5	115	116
#MS2	4.1	2.5	1.1	119	111
#MS3	3.4	1.9	0.9	114	110
#MS4	2.5	1.4	0.7	116	116
<b>Mean R [%]</b>				<b>116</b>	<b>113</b>

Data showing the dilution of *endogenous* mouse Periostin in mouse plasma samples

Sample ID	mouse Periostin [nmol/l]			R [%]	
	ref	1+1	1+3	1+1	1+3
#MP1	2.9	2.1	1.2	147	163
#MP2	3.2	1.9	0.9	121	108
#MP3	2.6	1.6	0.7	122	114
#MP4	3.2	2.0	1.1	123	134
<b>Mean R [%]</b>				<b>128</b>	<b>130</b>

High measuring samples outside of the calibration range should be diluted with assay buffer (ASYBUF – provided in the kit).

## PRECISION

### Intra-assay precision & Inter-assay precision

Intra-assay (n=5) ≤ 6%, Inter-assay (n=15) ≤ 6%

Intra-assay: 2 samples of known concentrations were tested 5 times.

Inter-assay: 2 samples of known concentrations were tested 15 times within 2 kit lots by 2 different operators.

Intra-assay (n=5)	Sample 1	Sample 2	Inter-assay (n=15)	Sample 1	Sample 2
Mean (nmol/l)	1.0	7.8	Mean (nmol/l)	1.0	7.9
SD (nmol/l)	0.06	0.14	SD (nmol/l)	0.06	0.22
CV (%)	6	2	CV (%)	6	3

## SENSITIVITY

### Limit of detection (LOD)

The LOD is defined as the mean value of the back calculated concentration plus three times the standard deviation. The LOD of the Periostin mouse ELISA is **0.003 nmol/l**.

### Lower limit of quantification (LLOQ)

The LLOQ is defined as the accuracy of the back calculated concentrations and shall not exceed ±25% (acc. to ICH [Ref. 1]). The LLOQ of the Periostin mouse ELISA is **0.125 nmol/l**.

## SPECIFICITY

This assay recognizes endogenous (natural) and recombinant mouse Periostin.

### Experiments:

Samples containing endogenous Periostin were analysed.

The competition was performed by adding a >10-fold concentration of the coating antibody.

Competition of mouse serum and plasma samples containing endogenous mouse Periostin

Sample ID	Mouse Periostin [nmol/l]		R comp. [%]
	Reference	Competition	
# MS1	9.2	0.00	100
# MS2	8.6	0.00	100
# MS3	10.1	0.00	100
# MS4	10.0	0.00	100
# MP1	2.9	0.00	100
# MP2	3.0	0.00	100
# MP3	2.8	0.00	100
# MP4	3.4	0.00	100
<b>Mean R [%]</b>			<b>100</b>

Competition of a sample (Standard 7) containing recombinant mouse Periostin

sample ID	Mouse Periostin [nmol/l]		R comp. [%]
	Reference	Competition	
Standard 7	12.6	0.1	99

### CALIBRATION

This immunoassay is calibrated against purified recombinant mouse Periostin peptide.



## SAMPLE CHARACTERISTICS

### SAMPLE STABILITY

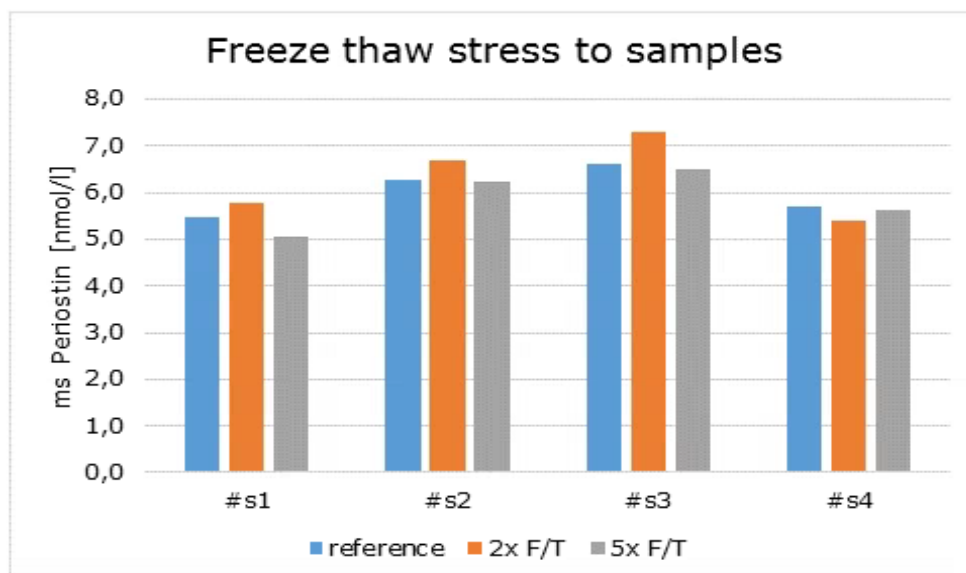
We recommend separating plasma or serum by centrifugation as soon as possible, e.g. 20 min at 2,000 x g, preferably at 4°C (2-8°C). Samples can be stored at 4°C (2-8°C) overnight. For long term storage, aliquot the acquired plasma or serum samples and store at -25°C or lower.

#### Samples can be subjected to 5 freeze-thaw cycles.

Aliquots of samples were stressed by freeze-thaw cycles. The reference is a sample which was not stressed. All samples were diluted according to protocol (1+200 diluted) shortly before testing.

Freeze-thaw stability of samples:

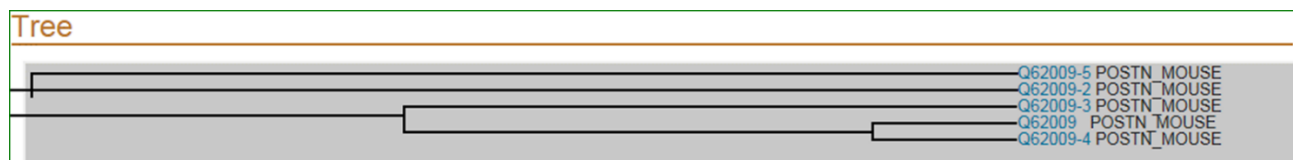
no of F/T cycles	Ref 0	2x	5x	
Sample ID	Mouse Periostin [nmol/l]			R 5x [%]
S1	5.5	5.8	5.0	92
S2	6.3	6.7	6.2	100
S3	6.6	7.3	6.5	98
S4	5.7	5.4	5.6	99
			<b>Mean [%]</b>	<b>97</b>



Undiluted serum samples are stable up to 5 freeze thaw cycles.

## ISOFORMS OF MOUSE PERIOSTIN

Currently, 5 different isoforms of Mouse Periostin (<http://www.uniprot.org/uniprot/Q62009>) have been identified. They are generated by alternative splicing. (Recombinant mouse Periostin used in this assay shows the amino acid sequence of Q62009-1 (Isoform 1): 838AA, Mass (Da): 93,144.



## SEQUENCE ALIGNMENT OF ISOFORMS 1,2,3,4,5:

Q62009	POSTN_MOUSE	1	MVPLLLPLYALLLLFLCDINPANANSYYDKVLAHSRIRGRDQGNVCAALQQILGTTKKKYFS	60
Q62009-2	POSTN_MOUSE	1	MVPLLLPLYALLLLFLCDINPANANSYYDKVLAHSRIRGRDQGNVCAALQQILGTTKKKYFS	60
Q62009-3	POSTN_MOUSE	1	MVPLLLPLYALLLLFLCDINPANANSYYDKVLAHSRIRGRDQGNVCAALQQILGTTKKKYFS	60
Q62009-4	POSTN_MOUSE	1	MVPLLLPLYALLLLFLCDINPANANSYYDKVLAHSRIRGRDQGNVCAALQQILGTTKKKYFS	60
Q62009-5	POSTN_MOUSE	1	MVPLLLPLYALLLLFLCDINPANANSYYDKVLAHSRIRGRDQGNVCAALQQILGTTKKKYFS	60
*****				
Q62009	POSTN_MOUSE	61	SCKNWWYQGAICGKKTIVLYECCPGYMRMEGMKGCPAVMPIDHVVYGTGLGIVGATTTQHYSD	120
Q62009-2	POSTN_MOUSE	61	SCKNWWYQGAICGKKTIVLYECCPGYMRMEGMKGCPAVMPIDHVVYGTGLGIVGATTTQHYSD	120
Q62009-3	POSTN_MOUSE	61	SCKNWWYQGAICGKKTIVLYECCPGYMRMEGMKGCPAVMPIDHVVYGTGLGIVGATTTQHYSD	120
Q62009-4	POSTN_MOUSE	61	SCKNWWYQGAICGKKTIVLYECCPGYMRMEGMKGCPAVMPIDHVVYGTGLGIVGATTTQHYSD	120
Q62009-5	POSTN_MOUSE	61	SCKNWWYQGAICGKKTIVLYECCPGYMRMEGMKGCPAVMPIDHVVYGTGLGIVGATTTQHYSD	120
*****				
Q62009	POSTN_MOUSE	121	VSKLREEIEGKGSYTYFAPSNEAWENLDSDIRRGLNENNVNVELLNALHSHMVNKRMLTKD	180
Q62009-2	POSTN_MOUSE	121	VSKLREEIEGKGSYTYFAPSNEAWENLDSDIRRGLNENNVNVELLNALHSHMVNKRMLTKD	180
Q62009-3	POSTN_MOUSE	121	VSKLREEIEGKGSYTYFAPSNEAWENLDSDIRRGLNENNVNVELLNALHSHMVNKRMLTKD	180
Q62009-4	POSTN_MOUSE	121	VSKLREEIEGKGSYTYFAPSNEAWENLDSDIRRGLNENNVNVELLNALHSHMVNKRMLTKD	180
Q62009-5	POSTN_MOUSE	121	VSKLREEIEGKGSYTYFAPSNEAWENLDSDIRRGLNENNVNVELLNALHSHMVNKRMLTKD	180
*****				
Q62009	POSTN_MOUSE	181	LKHGMVIPSMTNNLGLFINHYPNGVVTVNCARVIHGNQIATNGVVHVIDRVLVTQIGTSIQ	240
Q62009-2	POSTN_MOUSE	181	LKHGMVIPSMTNNLGLFINHYPNGVVTVNCARVIHGNQIATNGVVHVIDRVLVTQIGTSIQ	240
Q62009-3	POSTN_MOUSE	181	LKHGMVIPSMTNNLGLFINHYPNGVVTVNCARVIHGNQIATNGVVHVIDRVLVTQIGTSIQ	240
Q62009-4	POSTN_MOUSE	181	LKHGMVIPSMTNNLGLFINHYPNGVVTVNCARVIHGNQIATNGVVHVIDRVLVTQIGTSIQ	240
Q62009-5	POSTN_MOUSE	181	LKHGMVIPSMTNNLGLFINHYPNGVVTVNCARVIHGNQIATNGVVHVIDRVLVTQIGTSIQ	240
*****				
Q62009	POSTN_MOUSE	241	DFLEAEDDLSSFRAAAITSDLLESGLRDGHFTLFAPTNEAFEKLRPGVLERIMGDKVASE	300
Q62009-2	POSTN_MOUSE	241	DFLEAEDDLSSFRAAAITSDLLESGLRDGHFTLFAPTNEAFEKLRPGVLERIMGDKVASE	300
Q62009-3	POSTN_MOUSE	241	DFLEAEDDLSSFRAAAITSDLLESGLRDGHFTLFAPTNEAFEKLRPGVLERIMGDKVASE	300
Q62009-4	POSTN_MOUSE	241	DFLEAEDDLSSFRAAAITSDLLESGLRDGHFTLFAPTNEAFEKLRPGVLERIMGDKVASE	300
Q62009-5	POSTN_MOUSE	241	DFLEAEDDLSSFRAAAITSDLLESGLRDGHFTLFAPTNEAFEKLRPGVLERIMGDKVASE	300
*****				
Q62009	POSTN_MOUSE	301	ALMKYHILNTLQCSEAITGGAVFETMEGNTIEIGCEGDSISINGIKMVNKKDIVTKNGVI	360
Q62009-2	POSTN_MOUSE	301	ALMKYHILNTLQCSEAITGGAVFETMEGNTIEIGCEGDSISINGIKMVNKKDIVTKNGVI	360
Q62009-3	POSTN_MOUSE	301	ALMKYHILNTLQCSEAITGGAVFETMEGNTIEIGCEGDSISINGIKMVNKKDIVTKNGVI	360
Q62009-4	POSTN_MOUSE	301	ALMKYHILNTLQCSEAITGGAVFETMEGNTIEIGCEGDSISINGIKMVNKKDIVTKNGVI	360
Q62009-5	POSTN_MOUSE	301	ALMKYHILNTLQCSEAITGGAVFETMEGNTIEIGCEGDSISINGIKMVNKKDIVTKNGVI	360
*****				
Q62009	POSTN_MOUSE	361	HLIDEVLIIPDSAKQVIELAGKQTTFTDLVAQLGLASSLKPGEYTLAPVNNAFSDDTL	420
Q62009-2	POSTN_MOUSE	361	HLIDEVLIIPDSAKQVIELAGKQTTFTDLVAQLGLASSLKPGEYTLAPVNNAFSDDTL	420
Q62009-3	POSTN_MOUSE	361	HLIDEVLIIPDSAKQVIELAGKQTTFTDLVAQLGLASSLKPGEYTLAPVNNAFSDDTL	420
Q62009-4	POSTN_MOUSE	361	HLIDEVLIIPDSAKQVIELAGKQTTFTDLVAQLGLASSLKPGEYTLAPVNNAFSDDTL	420
Q62009-5	POSTN_MOUSE	361	HLIDEVLIIPDSAKQVIELAGKQTTFTDLVAQLGLASSLKPGEYTLAPVNNAFSDDTL	420
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Q62009	POSTN_MOUSE	421	SMDQRLKLLILQNHILKVKVGLSDLYNGQILETIGGKQLRVFVYRTAICIENSCMVRGSK	480
Q62009-2	POSTN_MOUSE	421	SMDQRLKLLILQNHILKVKVGLSDLYNGQILETIGGKQLRVFVYRTAICIENSCMVRGSK	480
Q62009-3	POSTN_MOUSE	421	SMDQRLKLLILQNHILKVKVGLSDLYNGQILETIGGKQLRVFVYRTAICIENSCMVRGSK	480
Q62009-4	POSTN_MOUSE	421	SMDQRLKLLILQNHILKVKVGLSDLYNGQILETIGGKQLRVFVYRTAICIENSCMVRGSK	480
Q62009-5	POSTN_MOUSE	421	SMDQRLKLLILQNHILKVKVGLSDLYNGQILETIGGKQLRVFVYRTAICIENSCMVRGSK	480
*****				
Q62009	POSTN_MOUSE	481	QGRNGAIHIFREIIQPAEKSLHDKLRQDKRFSIFLSLLEAADLKDLLTQPGDWTFLFAPTN	540
Q62009-2	POSTN_MOUSE	481	QGRNGAIHIFREIIQPAEKSLHDKLRQDKRFSIFLSLLEAADLKDLLTQPGDWTFLFAPTN	540
Q62009-3	POSTN_MOUSE	481	QGRNGAIHIFREIIQPAEKSLHDKLRQDKRFSIFLSLLEAADLKDLLTQPGDWTFLFAPTN	540
Q62009-4	POSTN_MOUSE	481	QGRNGAIHIFREIIQPAEKSLHDKLRQDKRFSIFLSLLEAADLKDLLTQPGDWTFLFAPTN	540
Q62009-5	POSTN_MOUSE	481	QGRNGAIHIFREIIQPAEKSLHDKLRQDKRFSIFLSLLEAADLKDLLTQPGDWTFLFAPTN	540
*****				

Q62009	POSTN_MOUSE	541	DAFKGMTSEERELLIGDKNALQNIILYHLTPGVYIGKGFEPGVNINILKTTQGSKIYKGV	600
Q62009-2	POSTN_MOUSE	541	DAFKGMTSEERELLIGDKNALQNIILYHLTPGVYIGKGFEPGVNINILKTTQGSKIYKGV	600
Q62009-3	POSTN_MOUSE	541	DAFKGMTSEERELLIGDKNALQNIILYHLTPGVYIGKGFEPGVNINILKTTQGSKIYKGV	600
Q62009-4	POSTN_MOUSE	541	DAFKGMTSEERELLIGDKNALQNIILYHLTPGVYIGKGFEPGVNINILKTTQGSKIYKGV	600
Q62009-5	POSTN_MOUSE	541	DAFKGMTSEERELLIGDKNALQNIILYHLTPGVYIGKGFEPGVNINILKTTQGSKIYKGV	600
*****				
Q62009	POSTN_MOUSE	601	NETLLVNLKSKESDIMTTNGVIHVVDKLLYPADIPVGNLQLELLLNKLIKYIQIKFVRG	660
Q62009-2	POSTN_MOUSE	601	NETLLVNLKSKESDIMTTNGVIHVVDKLLYPADIPVGNLQLELLLNKLIKYIQIKFVRG	660
Q62009-3	POSTN_MOUSE	601	NETLLVNLKSKESDIMTTNGVIHVVDKLLYPADIPVGNLQLELLLNKLIKYIQIKFVRG	660
Q62009-4	POSTN_MOUSE	601	NETLLVNLKSKESDIMTTNGVIHVVDKLLYPADIPVGNLQLELLLNKLIKYIQIKFVRG	660
Q62009-5	POSTN_MOUSE	601	NETLLVNLKSKESDIMTTNGVIHVVDKLLYPADIPVGNLQLELLLNKLIKYIQIKFVRG	660
*****				
Q62009	POSTN_MOUSE	661	STFKEIPMTVYTTKIITKVVEPKIKVIQGSQPIIKTEGPAMTKIQIEGDDPFRLIKEGE	720
Q62009-2	POSTN_MOUSE	661	STFKEIPMTVYR-----PAMTKIQIEGDDPFRLIKEGE	693
Q62009-3	POSTN_MOUSE	661	STFKEIPMTVYTTKIITKVVEPKIKVIQGSQPIIKTEGPAMTKIQIEGDDPFRLIKEGE	720
Q62009-4	POSTN_MOUSE	661	STFKEIPMTVYTTKIITKVVEPKIKVIQGSQPIIKTEGPAMTKIQIEGDDPFRLIKEGE	720
Q62009-5	POSTN_MOUSE	661	STFKEIPMTVYR-----PAMTKIQIEGDDPFRLIKEGE	693
*****				
Q62009	POSTN_MOUSE	721	TVTEVIHGEVPIKKYTKIIDGVPVEITEKQTREREIITGPEIKYTRISTGGGETGETLQK	780
Q62009-2	POSTN_MOUSE	694	TVTEVIHGEVPIKKYTKIIDGVPVEITEKQTREREIITGPEIKYTRISTGGGETGETLQK	753
Q62009-3	POSTN_MOUSE	721	TVTEVIHGEVPIKKYTKIIDGVPVEITEKQTREREIITGPEIKYTRISTGGGETGETLQK	780
Q62009-4	POSTN_MOUSE	721	TVTEVIHGEVPIKKYTKIIDGVPVEITEKQTREREIIT-----	758
Q62009-5	POSTN_MOUSE	694	TVTEVIHGEVPIKKYTKIIDGVPVEITEKQTREREIITGPEIKYTRISTGGGETGETLQK	753
*****				
Q62009	POSTN_MOUSE	781	FLQKEVSKVTKFIEGGDGHLEFDEEIKRLLQGDTPAKKIPANKRVQGPARRRSREGRSQ	838
Q62009-2	POSTN_MOUSE	754	FLQKEVSKVTKFIEGGDGHLEFDEEIKRLLQGDTPAKKIPANKRVQGPARRRSREGRSQ	811
Q62009-3	POSTN_MOUSE	781	FLQ-----KDTPAKKIPANKRVQGPARRRSREGRSQ	810
Q62009-4	POSTN_MOUSE	759	-----DTPAKKIPANKRVQGPARRRSREGRSQ	784
Q62009-5	POSTN_MOUSE	754	FLQ-----KDTPAKKIPANKRVQGPARRRSREGRSQ	783
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This Mouse Periostin ELISA assay detects:

- Isoform 1 (mouse Periostin recombinant Standard/Calibrator utilized in this assay)
- Isoform 2 (due to sequence homology)
- Isoform 3 (due to sequence homology)
- Isoform 5 (experimentally analysed with recombinant protein).

Isoform 4 shows a change of sequence in the respective epitope of the coating antibody. Thus, it is not certain if this assay detects Isoform 4.

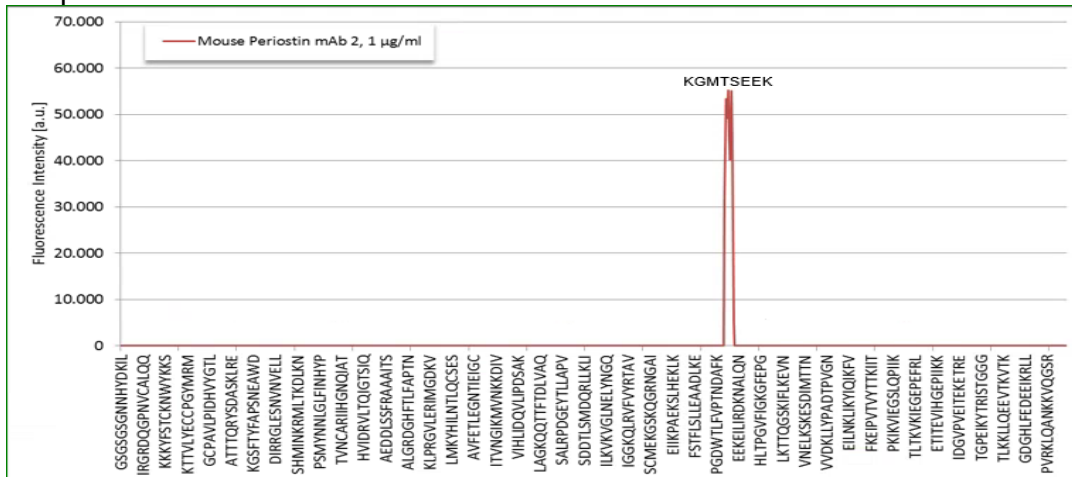
### EPITOP MAPPING OF UTILIZED ANTIBODIES

Epitop mapping has been performed by Pepperprint.

#### Coating antibody:

The coating antibody which is a monoclonal mouse antibody binds to m\_e1: KGMTSEER (AA544-551) of Q62009-1 (Isoform 1).

Graph:



### Detection antibody:

The detection antibody which is a polyclonal goat antibody binds to the following AA sequences of Q62009-1 (Isoform 1):

p\_e1: TQHYSDVSK (AA115-123)

p\_e2: EIEGKGSY (AA127-134)

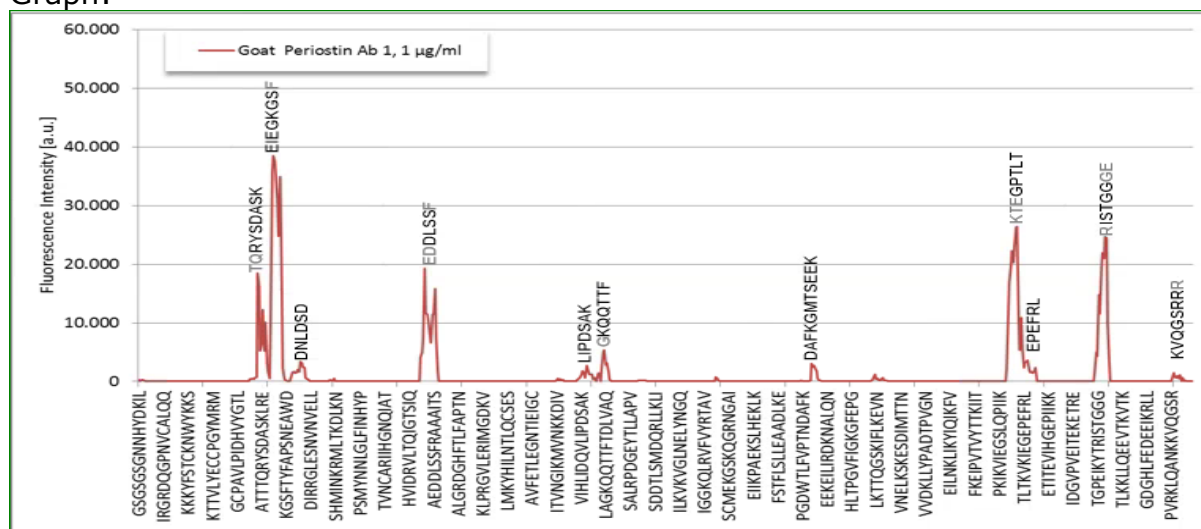
p\_e3: EDDLSSF (AA246-252)

p\_e4: PAMT (AA672-676)

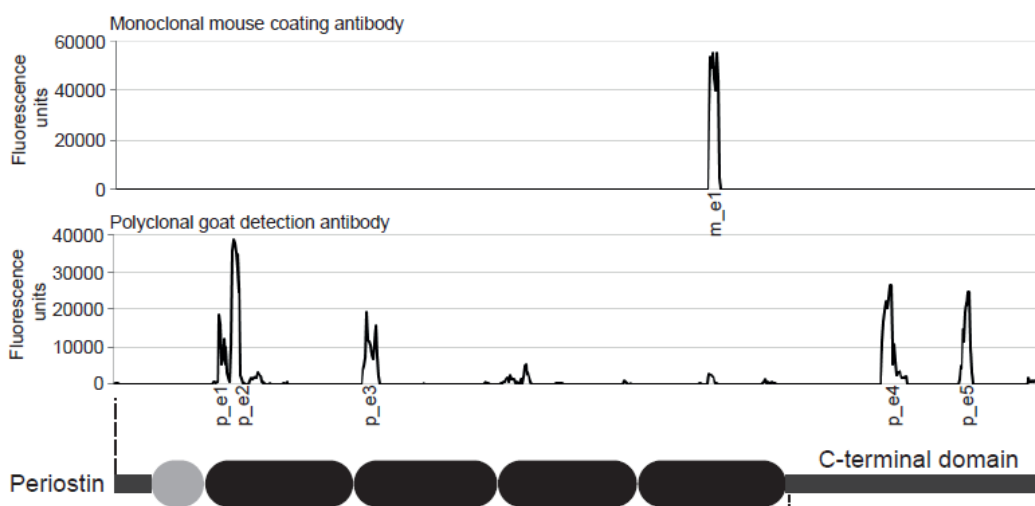
p\_e5: RISTGGGE (AA738-746)

DAB binds to p\_e1, p\_e2, p\_e3, p\_e4: polyclonal goat IgG, anti-human periostin Ab

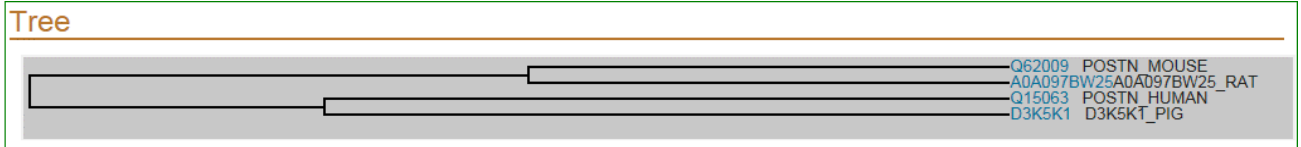
### Graph:



### Summary:



## INTERSPECIES ALIGNMENT



	Human	Mouse	Rat	Pig
Human	100%			
Mouse	90%	100%		
Rat	90%	98%	100%	
Pig	95%	91%	92%	100%

<b>Human periostin isoform 1:</b>	UniProt Q15063-1	7 isoforms described
<b>Mouse periostin isoform 1:</b>	UniProt Q62009-1	5 isoforms described
<b>Rat periostin isoform 1:</b>	UniProt A0A097BW25-1	1 isoform described
<b>Pig periostin isoform 1:</b>	UniProt D3K5K1	1 isoform described

Q15063	POSTN HUMAN	1	MIPFLPMFSLLLLLLI--VNPINANNHYDKILAHSRIRGRDQGNVNCALQQILGTKKKYFS	58
Q62009	POSTN MOUSE	1	MVPLLPYALLLLFLCDINPANANSYYDKVLAHSRIRGRDQGNVNCALQQILGTKKKYFS	60
D3K5K1	D3K5K1 PIG	1	MIPFLPVFSLFLLVV--VNPANANGHYDKILAHSRIRGRDQGNVNCALQQILGTKKKYFS	58
A0A097BW25	A0A097BW25_RAT	1	MVPLLPISALLLFLCDVDPANANSYYDKVLAHSRIRGRDQGNVNCALQQILGTKKKYFS	60
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Q15063	POSTN HUMAN	59	TCKNWKYSICGQKTTVLYECCPGYMRMGMKGC PAVLPIDHVYGTGIVGATTQRYSD	118
Q62009	POSTN MOUSE	61	SCKNWKYQGAICGKTTVLYECCPGYMRMGMKGC PAVMPIDHVYGTGIVGATTQHYSD	120
D3K5K1	D3K5K1 PIG	59	TCKNWKYQGAICGKTTVLYECCPGYMRMGMKGC PAVLPIDHVYGTGIVGATTQRYSD	118
A0A097BW25	A0A097BW25_RAT	61	SCKNWKYQGAICGKTTVLYECCPGYMRMGMKGC PAVMPIDHVYGTGIVGATTQHYSD	120
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Q15063	POSTN HUMAN	119	ASKLREEIEGKGSFTYFAPSNEAWNLDSDIRRGLESNVVVELLNALHSHMINKRMLTKD	178
Q62009	POSTN MOUSE	121	VSKLREEIEGKGSYTYFAPSNEAWNLDSDIRRGLENNVNVVVELLNALHSHMVNKRMLTKD	180
D3K5K1	D3K5K1 PIG	119	VSKLREEIEGKGSFTYFAPSNEAWNLDSDIRRGLESNVVVELLNALHSHMINKRMLTKD	178
A0A097BW25	A0A097BW25_RAT	121	VSKLREEIEGKGSYTYFAPSNEAWNLDSDIRRGLENNVNVVVELLNALHSHMVNKRMLTKD	180
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Q15063	POSTN HUMAN	179	LKNGMIIPSMYNNLGLFINHYPNGVTVNVCARIHGNQIATNGVVHVIVDRVLTQIGTSIQ	238
Q62009	POSTN MOUSE	181	LKHGMVIPSmyNNLGLFINHYPNGVTVNVCARVIHGNQIATNGVVHVIVDRVLTQIGTSIQ	240
D3K5K1	D3K5K1 PIG	179	LKNGMIIPSMYNNLGLFINHYPNGVTVNVCARIHGNQIATNGVVHVIVDRVLTQIGTSIQ	238
A0A097BW25	A0A097BW25_RAT	181	LKHGMVIPSmyNNLGLFINHYPNGVTVNVCARVIHGNQIATNGVVHVIVDRVLTQIGTSIQ	240
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Q15063	POSTN HUMAN	239	DFIEAEDDLSFRAAAITSDILEALGRDGHFTLFAPTNEAFEKLPGRVLERIMGDKVASE	298
Q62009	POSTN MOUSE	241	DFLEAEDDLSFRAAAITSDILLES LGRDGHFTLFAPTNEAFEKLPGRVLERIMGDKVASE	300
D3K5K1	D3K5K1 PIG	239	DFIEAEDDLSFRAAAITSDILESLGRDGHFTLFAPTNEAFEKLPGRVLERIMGDKVASE	298
A0A097BW25	A0A097BW25_RAT	241	DFIEAEDLSFRAAAITSDILLES LGRDGHFTLFAPTNEAFEKLPGRVLERIMGDKVASE	300
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Q15063	POSTN HUMAN	299	ALMKYHILNTLQCSEASIMGGAVFETLEGNTEIEIGCDGDSITVNGIKMVNKKDIVTNGVI	358
Q62009	POSTN MOUSE	301	ALMKYHILNTLQCSEAITGGAVFETMEGNTIEIGCEGDSISINGIKMVNKKDIVTKNGVI	360
D3K5K1	D3K5K1 PIG	299	ALMKYHILNTLQCSEASITGGAVFETLEGNTEIEIGCDGDSITVNGIKMVNKKDIVTNGVI	358
A0A097BW25	A0A097BW25_RAT	301	ALMKYHILNTLQCSEAITGGAVFETMEGNTIEIGCEGDSISINGIKMVNKKDIVTKNGVI	360
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Q15063	POSTN HUMAN	359	HLIDQVLIIPDSAKQVIELAGKQQTFTDLVAQLGLASALRPDGEYTLAPVNNAFSDDTL	418
Q62009	POSTN MOUSE	361	HLIDEVLIPDSAKQVIELAGKQQTFTDLVAQLGLASSLKPDGEYTLAPVNNAFSDDTL	420
D3K5K1	D3K5K1 PIG	359	HLIDQVLIIPDSAKQVIELAGKQQTFTDLVAQLGLASALRPDGEYTLAPVNNAFSDDTL	418
A0A097BW25	A0A097BW25_RAT	361	HLIDEVLIPDSAKQVIELAGKQQTFTDLVAQLGLASSLKPDGEYTLAPVNNAFSDDTL	420
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Q15063	POSTN HUMAN	419	SMDQRLKLILQNHILKVKVGLNELYNGQILETIGGKQLRVFVYRTAVCIENSCMRGSK	478
Q62009	POSTN MOUSE	421	SMDQRLKLILQNHILKVKVGLSDLYNGQILETIGGKQLRVFVYRTAVCIENSCMRGSK	480
D3K5K1	D3K5K1 PIG	419	SMDQRLKLILQNHILKVKVGLNELYNGQILETIGGKQLRVFVYRTAVCIENSCMRGSK	478
A0A097BW25	A0A097BW25_RAT	421	SMDQRLKLILQNHILKVKVGLSDLYNGQILETIGGKQLRVFVYRTAVCIENSCMRGSK	480
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Q15063	POSTN HUMAN	479	QGRNGAIIHIFREIIPAEKSLHEKLRQDKRFSIFLSLLEAADLKELLTQPGDWTFLVFTN	538
Q62009	POSTN MOUSE	481	QGRNGAIIHIFREIIPAEKSLHDKLRQDKRFSIFLSLLEAADLKDLLTQPGDWTFLVFTN	540
D3K5K1	D3K5K1 PIG	479	QGRNGAIIHIFREIIPAEKSLHEKLRQDKRFSIFLSLLEAADLKELLTQPGDWTFLVFTN	538
A0A097BW25	A0A097BW25_RAT	481	QGRNGAIIHIFREIIPAEKSLHEKLRQDKRFSIFLSLLEAADLKDLLTQPGDWTFLVFTN	540
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Q15063	POSTN HUMAN	539	DAFKGMTSEEKILIRDKNALQNIILYHLTPGVFIKGFEPGVNINILKTTQGSKIYKGV	598
Q62009	POSTN MOUSE	541	DAFKGMTSEERELIGDKNALQNIILYHLTPGVYIGKGFEPGVNINILKTTQGSKIYKGV	600
D3K5K1	D3K5K1 PIG	539	DAFKGMTSEEKILIRDKNALQNIILYHLTPGVFIKGFEPGVNINILKTTQGSKIYKGV	598
A0A097BW25	A0A097BW25_RAT	541	DAFKGMTNEEREELIGDKNALQNIILYHLTPGVYIGKGFEPGVNINILKTTQGSKIYKGV	600
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Q15063	POSTN HUMAN	599	NETLLVNLKSKESSDIMTTNGVIHVVDKLLYPADIPVGNQDLELNLKLIKIYIYKIFVRG	658
Q62009	POSTN MOUSE	601	NETLLVNLKSKESSDIMTTNGVIHVVDKLLYPADIPVGNQDLELNLKLIKIYIYKIFVRG	660
D3K5K1	D3K5K1 PIG	599	NETLLVNLKSKESSDIMTTNGVIHVVDKLLYPADIPVGNQDLELNLKLIKIYIYKIFVRG	658
A0A097BW25	A0A097BW25_RAT	601	NETLLVNLKSKESSDIMTTNGVIHVVDKLLYPADIPVGNQDLELNLKLIKIYIYKIFVRG	660
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Q15063	POSTN HUMAN	659	STFKEIPVTVTYTKIITKVVEPKIKVIEGSLQPIIKTEGPTLTKVKEGPEFRLIKEGE	718
Q62009	POSTN MOUSE	661	STFKEIPMTVTYTKIITKVVEPKIKVIEGSLQPIIKTEGPAMTKIQIEGDPDFRLIKEGE	720
D3K5K1	D3K5K1 PIG	659	STFKEIPITVYR-----PMITKVKIEGPELRLVKEGE	691
A0A097BW25	A0A097BW25_RAT	661	STFKEIPTVYR-----PAMTKIHIEGEPDFRLIKEGE	693
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Q15063	POSTN HUMAN	719	TITEVIHGEPIIKKYTKIIDGVPVEITEKETREERIITGPEIKYTRISTGGGETEETLKK	778
Q62009	POSTN MOUSE	721	TVTEVIHGEPIIKKYTKIIDGVPVEITEKETREERIITGPEIKYTRISTGGGETEETLQK	780
D3K5K1	D3K5K1 PIG	692	TVTEVIHGEPIIKKYTKIIDGVPVEITEKETREERIITGPEIKYTRISTGGGETEETLKK	751
A0A097BW25	A0A097BW25_RAT	694	TVTEVIHGEPIIKKYTKIIDGVPVEITEKETREERIITGPEIKYTRISTGGGETEETLQK	753
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Q15063	POSTN HUMAN	779	LLQEEVTKVTKFIEGGDGLFEDEEIKRLLQGDTIPVVKLQANKKVVQGSRRRLREGRSQ	836
Q62009	POSTN MOUSE	781	FLQKEVSKVTKFIIEGGDGLFEDEEIKRLLQGDTIPAKKIIPANQRVQGSRRRREGRSQ	838
D3K5K1	D3K5K1 PIG	752	LL-----QEDIPVVKIQAATKRQVQGSRRRREGDRPQ	781
A0A097BW25	A0A097BW25_RAT	754	FLQ-----KDTPAKKIQANQRVQGSRRRREGRSQ	783
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## **VALIDATION**

The assay is fully validated according to ICH Q2 (R1), Ref. (1,2).

## **REFERENCES**

- [1] CPMP/ICH/381/95  
ICH Topic Q2 (R1) „Validation of Analytical Procedures: Text and Methodology“  
including:  
ICH Q2A “Text on Validation of Analytical Procedures”  
ICH Q2B “Validation of Analytical Procedures: Methodology”
- [2] Food and Drug Administration  
Guidance for Industry, Bioanalytical Method Validation, Draft Guidance,  
September 2013

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