

## APPENDIX

**Table A.1** CS epitope (WF6 epitope) levels (ng/ml) and median CS epitope (WF6 epitope) levels (ng/ml) in PMICF samples during the unloaded and the loaded period from ten miniscrew implants in Part I

ID Time period	A		B		C		D		E		Median value
	MI 1	MI 2	MI 3	MI 4	MI 5	MI 6	MI 7	MI 8	MI 9	MI 10	
D1	1.047	1.893	0.000	0.000	0.000	1.762	16.683	39.305	19.570	27.065	1.828
D3	2.827	2.032	0.000	0.000	32.761	4.393	20.107	13.310	10.852	12.026	7.623
D5	1.132	8.251	8.248	0.000	58.531	1.380	15.742	13.337	9.317	17.378	8.784
D7*	0.952	3.099	0.000	0.000	1.516	2.974	10.152	13.687	6.392	14.927	3.037
D14	2.370	90.149	0.000	0.000	11.746**	2.787	10.233	9.568**	9.490	14.188	9.529
D21	679.890	78.856	1.699	16.591	2.538**	0.485	11.719	16.807**	11.732	19.288	14.162
D28	178.290	380.730	34.566	47.971	N/V	2.627	13.800	18.899**	8.776	22.681	22.681
D35	4.747	80.463	9.696	62.732	N/V	0.977	9.625	12.124**	15.789	21.06	12.124

\* means the time when an orthodontic force (50g) was applied to the miniscrew implants

\*\* means the CS epitope (WF6 epitope) levels collected from the PMICF of miniscrew implant which considered for mobility

N/V means not available due to the miniscrew implant was removed

**Table A.2** Distribution of CS epitope (WF6 epitope) levels in PMICF samples collected in Part I

### Tests of Normality

	Kolmogorov-Smirnov <sup>(a)</sup>			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Unloaded	.258	6	.200 (*)	.886	6	.297
Loaded	.324	6	.048	.714	6	.009

\* This is a lower bound of the true significance.

(a) Lilliefors Significance Correction

**Table A.3** Comparison of CS epitope (WF6 epitope) levels (ng/ml) between the unloaded and the loaded group in Part I

**NPar Test**

**Mann-Whitney Test**

**Ranks**

	Force	N	Mean Rank	Sum Ranks
CS epitope (WF6 epitope) level (ng/ml)	Unloaded	40	32.88	1315.00
	Loaded	38	46.47	1766.00
	Total	78		

**Test Statistics<sup>a</sup>**

	CS epitope (WF6 epitope)level (ng/ml)
Mann-Whitney U	495.000
Wilcoxon W	1315.000
Z	-2.652
Asymp. Sig.(2-tailed)	.008

(a) Grouping Variable: force

**Table A.4** CS epitope (WF6 epitope) levels (ng/ml) and the median CS epitope (WF6 epitope) levels (ng/ml) in PMICF samples during the unloaded and the loaded period from ten miniscrew implants in Part II

ID Time period	F		G		H		I		J		Median value
	MI 11	MI 12	MI 13	MI 14	MI 15	MI 16	MI 17	MI 18	MI 19	MI 20	
D 1	57.630	54.437	126.060	18.910	184.470	55.269	19.570	27.065	50.640	105.830	54.853
D 3	106.340	122.970	16.590	0.000	42.295	48.747	10.852	12.026	95.010	162.820	45.521
D 5	119.240	267.310	23.220	28.570	44.277	47.577	9.317	17.378	758.030	118.930	45.927
D 7*	169.250	127.810	29.640	24.230	53.202	36.334	6.392	14.927	261.720	160.110	44.768
D14	200.390	181.910	24.690	44.270	54.231	33.993	9.490	14.188	962.670	243.070	49.251
D 21	112.450	59.649	29.570	32.380	18.148	27.079	11.732	19.288	1025.110	79.740	30.975
D 28	120.930	144.840	14.560	0.000	63.786	28.430	8.776	22.681	17.310	91.670	25.556
D 35	190.000	176.140	0.000	20.051	26.694	26.260	15.789	21.060	185.340	185.860	26.477
D 42	375.080	565.170	0.000	133.120	20.961	30.830	4.053	8.748	107.650	100.660	65.745
D 49	201.080	262.840	25.430	51.670	152.690	291.170	2.523	20.062	112.000	172.820	132.345
D 56	D/O	D/O	22.420	48.020	27.803	24.376	58.672	23.300	126.800	6348.900	37.912
D 63	D/O	D/O	25.700	23.670	26.438	11.714	3.457	3.570	133.330	1042.800	24.685
D 70	D/O	D/O	57.881	42.799	0.000	0.000	4.060	3.078	224.550	742.830**	23.430

\* means the time when an orthodontic force (50g) was applied to the miniscrew implants,

\*\* means the CS epitope (WF6 epitope) levels collected from the PMICF of miniscrew implant which considered for mobility,

D/O means the PMICF could not collect due to patient's dropout.

**Table A.5** Distribution of CS epitope (WF6 epitope) levels in PMICF samples collected in Part II

#### Tests of Normality

	Kolmogorov-Smirnov <sup>(a)</sup>			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Unloaded	.238	40	.000	.587	40	.000
Loaded	.278	40	.000	.680	40	.000

a Lilliefors Significance Correction

**Table A.6** Comparison of CS epitope (WF6 epitope) levels (ng/ml) between the unloaded and the loaded group in Part II

**NPar Test**

**Mann-Whitney Test**

	Force	Ranks		
		N	Mean Rank	Sum Ranks
CS epitope (WF6 epitope) level (ng/ml)	Unloaded	39	58.31	2274.00
	Loaded	79	60.09	4747.00
	Total	118		

**Test Statistics<sup>a</sup>**

	CS epitope (WF6 epitope)level (ng/ml)
Mann-Whitney U	1419.000
Wilcoxon W	2274.000
Z	-.266
Asymp. Sig.(2-tailed)	.790

(a) Grouping Variable: force

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