

Experiment Number: **G18034C**

Test Type: **Genetic Toxicology - In Vitro
Micronucleus**

G03: In Vitro Micronucleus Summary Data

Test Compound: **Remuda Full Strength|Distilled Water**

Date Report Requested: **09/24/2021**

Time Report Requested: **14:29:15**

NTP Study Number:

G18034C

Cell Type:

TK6

Study Result:

Weakly Positive

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Date Report Requested: 09/24/2021

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Duration: 4 h; Activation: Without S9

Concentration (dilution)	% Relative Survival	% Apoptosis and Necrosis	Fold Change in Apoptosis and Necrosis	% MN		p-Value
	Mean	Mean	Mean	Mean ± SEM		
Vehicle Control ¹	100.0	1.66	1.0	0.423 ±	0.023	
0.000076	103.8	2.0	1.2	0.660 ±	0.020	0.1374
0.000107	107.1	1.63	1.0	0.680 ±	0.012	0.0802
0.000151	103.4	1.6	1.0	0.480 ±	0.031	1.0000
0.000214	112.5	1.6	1.0	0.507 ±	0.074	1.0000
0.000262	110.6	1.73	1.0	0.820 ±	0.012	0.0054 *
0.000321	103.5	1.83	1.1	0.907 ±	0.116	0.0047 *
0.000393	100.1	1.83	1.1	0.754 ±	0.047	0.0175 *
0.000481	71.9	4.03	2.4	1.312 ±	0.116	< 0.001 *
0.000589	29.8	12.7	7.7	1.540 ±	0.130	
0.000722	9.5	68.57	41.3	158.510 ±	154.090	
0.000884	2.4	83.87	50.5	2.050 ±	0.000	
0.00125	0.1	99.43	59.9	14.390 ±	7.460	
Trend p-Value				< 0.001 *		
VIN ²	63.4	14.68	8.8	3.895 ±	0.366	0.0010 *

Trial Summary: Weakly Positive

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Concentration (dilution)	% Relative Survival	% Apoptosis and Necrosis	Fold Change in Apoptosis and Necrosis	% MN	p-Value
	Mean	Mean	Mean	Mean ± SEM	
Vehicle Control ¹	100.0	2.31	1.0	0.397 ± 0.022	
0.000076	91.7	2.77	1.2	0.447 ± 0.071	1.0000
0.000107	97.2	2.73	1.2	0.293 ± 0.044	1.0000
0.000151	91.3	2.87	1.2	0.533 ± 0.035	0.4424
0.000214	88.9	2.57	1.1	0.520 ± 0.076	0.7873
0.000262	83.8	2.53	1.1	0.767 ± 0.064	0.0140 *
0.000321	80.7	2.57	1.1	0.673 ± 0.018	0.0340
0.000393	59.8	3.57	1.5	1.067 ± 0.168	0.0033 *
0.000481	22.1	7.2	3.1	1.500 ± 0.370	
0.000589	1.7	69.17	30.0	3.770 ± 1.560	
0.000722	6.9	68.07	29.5	10.440 ± 9.560	
0.000884	0.0	99.33	43.1		
0.00125	0.1	90.8	39.4	1.230 ± 1.230	
Trend p-Value				< 0.001 *	
VIN ²	49.9	13.55	5.9	5.830 ± 1.469	0.0010 *

Trial Summary: Weakly Positive

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Date Report Requested: 09/24/2021

Time Report Requested: 14:29:15

Duration: 24 h; Activation: Without S9

Concentration (dilution)	% Relative Survival	% Apoptosis and Necrosis	Fold Change in Apoptosis and Necrosis	% MN		p-Value
	Mean	Mean	Mean	Mean ± SEM		
Vehicle Control ¹	100.0	2.14	1.0	0.829 ±	0.052	
0.000076	108.7	2.33	1.1	0.613 ±	0.107	1.0000
0.000107	103.9	1.93	0.9	1.007 ±	0.152	0.6149
0.000151	104.2	2.1	1.0	0.847 ±	0.103	1.0000
0.000214	94.9	3.27	1.5	0.780 ±	0.092	1.0000
0.000262	86.1	7.63	3.6	0.847 ±	0.035	1.0000
0.000321	62.0	21.37	10.0	0.670 ±	0.090	
0.000393	30.2	53.5	25.0	0.530 ±	0.060	
0.000481	0.0	99.83	46.7	25.000 ±	25.000	
0.000589	0.0	99.87	46.7	33.330 ±	0.000	
0.000722	0.0	99.9	46.8	0.000 ±	0.000	
0.000884	0.0	99.8	46.7	555.560 ±	275.940	
0.00125	0.0	99.67	46.6	37.780 ±	31.350	
Trend p-Value				0.4542		
VIN ³	68.7	14.8	6.9	5.690 ±	0.447	0.0010 *
Trial Summary: Negative						

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Date Report Requested: 09/24/2021

Time Report Requested: 14:29:15

Duration: 4 h; Activation: With 1% Rat S9

Concentration (dilution)	% Relative Survival	% Apoptosis and Necrosis	Fold Change in Apoptosis and Necrosis	% MN	p-Value
	Mean	Mean	Mean	Mean ± SEM	
Vehicle Control ¹	100.0	1.84	1.0	0.671 ± 0.039	
0.000076	102.2	1.4	0.8	0.707 ± 0.052	1.0000
0.000107	103.8	1.67	0.9	0.773 ± 0.105	1.0000
0.000151	103.0	1.53	0.8	0.793 ± 0.027	1.0000
0.000214	100.2	1.47	0.8	0.833 ± 0.013	1.0000
0.000262	110.8	1.6	0.9	0.833 ± 0.112	1.0000
0.000321	118.9	1.63	0.9	0.907 ± 0.085	0.3353
0.000393	125.3	1.63	0.9	1.027 ± 0.098	0.0546
0.000481	122.9	1.97	1.1	1.193 ± 0.044	0.0077 *
0.000589	96.5	2.7	1.5	1.393 ± 0.158	0.0028 *
0.000722	65.0	4.73	2.6	1.267 ± 0.196	0.0145 *
0.000884	40.0	11.87	6.4	1.870 ± 0.430	
0.00125	14.8	56.07	30.4	7.930 ± 5.140	
Trend p-Value				< 0.001 *	
CPA ⁴	51.3	11.88	6.4	2.630 ± 0.163	0.0010 *

Trial Summary: Weakly Positive

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Duration: 4 h; Activation: With 1% Rat S9

Concentration (dilution)	% Relative Survival	% Apoptosis and Necrosis	Fold Change in Apoptosis and Necrosis	% MN		p-Value
	Mean	Mean	Mean	Mean ± SEM		
Vehicle Control ¹	100.0	1.79	1.0	0.388 ±	0.019	
0.000076	85.9	3.03	1.7	0.233 ±	0.007	1.0000
0.000107	78.7	2.37	1.3	0.480 ±	0.117	1.0000
0.000151	90.6	2.27	1.3	0.347 ±	0.075	1.0000
0.000214	87.3	2.37	1.3	0.393 ±	0.048	1.0000
0.000262	85.9	2.2	1.2	0.667 ±	0.098	0.0918
0.000321	80.3	2.6	1.5	0.553 ±	0.127	0.9124
0.000393	72.0	3.07	1.7	0.787 ±	0.129	0.0409
0.000481	59.7	3.83	2.1	0.953 ±	0.094	0.0105 *
0.000589	38.5	6.03	3.4	1.390 ±	0.270	
0.000722	4.2	41.77	23.3	1.010 ±	0.570	
0.000884	0.0	92.7	51.8	200.000 ± 200.000		
0.00125	0.0	92.77	51.8	250.000 ± 250.000		
Trend p-Value				< 0.001 *		
CPA ⁴	63.2	10.73	6.0	2.148 ±	0.124	0.0010 *

Trial Summary: Weakly Positive

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LEGEND

MN = Micronuclei, CAS = Chemical abstract registry

For the 4 h chemical exposures with and without S9, the medium with test article (and S9, if present) is changed after 4 h and replaced with fresh medium without test article or S9, and cells are cultured for an additional 20 h to achieve a total culture time of 24 h

Values given as Mean or Mean \pm Standard Error Mean

Statistical analysis only performed on: % MN

Pairwise comparison with the vehicle control; values are significant at $P \leq 0.025$ by Dunn's test

Positive control: pairwise comparison with the vehicle control; values are significant at $P \leq 0.05$ by Mann Whitney U test

Apoptotic and necrotic cells are detected in the assay as ethidium monoazide (EMA)-positive events

Concentration-related trend; significant at $P \leq 0.025$ by Jonckheere's test

* Statistically significant pairwise or trend test

The number of wells per concentration of test article = 3

1: Vehicle Control: Distilled Water

2: Positive Control: 3 ng/mL Vinblastine sulfate

3: Positive Control: 0.5 ng/mL Vinblastine sulfate

4: Positive Control: 3 ug/mL Cyclophosphamide monohydrate

**** END OF REPORT ****