

Experiment Number: **G18030C**

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

**G03: In Vitro Micronucleus Summary Data**

Test Compound: **Touchdown Total|Distilled Water**

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

Time Report Requested: **14:23:49**

**NTP Study Number:**

G18030C

**Cell Type:**

TK6

**Study Result:**

Negative

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Micronucleus

Test Compound: Touchdown Total|Distilled Water

Time Report Requested: 14:23:49

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 <sup>1</sup>	100.0	1.27	1.0	0.359 ± 0.016	
0.000014	89.3	1.13	0.9	0.393 ± 0.018	1.0000
0.00002	98.6	1.2	0.9	0.373 ± 0.079	1.0000
0.000028	96.7	1.27	1.0	0.307 ± 0.071	1.0000
0.000039	92.1	1.2	0.9	0.340 ± 0.042	1.0000
0.000055	97.0	1.27	1.0	0.347 ± 0.027	1.0000
0.000079	91.9	1.23	1.0	0.400 ± 0.050	1.0000
0.00011	95.4	1.3	1.0	0.360 ± 0.031	1.0000
0.000156	74.3	1.4	1.1	0.460 ± 0.035	0.4038
0.000221	78.5	2.57	2.0	0.647 ± 0.298	1.0000
0.000312	79.3	1.27	1.0	0.520 ± 0.031	0.0577
0.000441	48.9	3.13	2.5	1.093 ± 0.328	0.0363
0.000624	13.3	55.27	43.7	0.610 ± 0.610	
0.000883	8.2	65.93	52.1	0.300 ± 0.300	
Trend p-Value				< 0.001 *	
VIN <sup>2</sup>	80.0	6.45	5.1	2.425 ± 0.240	< 0.001 *
Trial Summary: Equivocal					

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	Mean	Mean	Mean	Mean ± SEM	
Vehicle Control <sup>1</sup>	100.0	1.96	1.0	0.421 ± 0.020	
0.000028	109.4	2.8	1.4	0.373 ± 0.018	1.0000
0.000039	111.2	2.43	1.2	0.240 ± 0.060	1.0000
0.000055	105.7	2.47	1.3	0.300 ± 0.035	1.0000
0.000078	110.3	2.67	1.4	0.300 ± 0.072	1.0000
0.00011	105.2	2.47	1.3	0.387 ± 0.037	1.0000
0.000156	100.7	2.2	1.1	0.320 ± 0.020	1.0000
0.000221	104.2	2.23	1.1	0.480 ± 0.064	1.0000
0.000313	86.2	2.6	1.3	0.553 ± 0.096	0.8232
0.000442	16.3	65.87	33.7	9.380 ± 4.040	
0.000625	0.0	99.25	50.8	25.000 ± 25.000	
0.00125	0.0	97.0	49.6	0.000 ± 0.000	
Trend p-Value				0.7919	
VIN <sup>2</sup>	64.6	11.68	6.0	3.590 ± 0.398	0.0010 *
Trial Summary: Negative					

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Date Report Requested: 09/24/2021

Test Type: Genetic Toxicology - In Vitro  
Micronucleus

Test Compound: Touchdown Total|Distilled Water

Time Report Requested: 14:23:49

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 <sup>1</sup>	100.0	1.33	1.0	0.566 ± 0.046	
0.000014	97.5	1.13	0.9	0.447 ± 0.074	1.0000
0.00002	101.5	1.27	1.0	0.413 ± 0.018	1.0000
0.000028	100.2	1.13	0.9	0.447 ± 0.027	1.0000
0.000039	96.2	1.37	1.0	0.433 ± 0.013	1.0000
0.000055	102.1	1.1	0.8	0.473 ± 0.029	1.0000
0.000079	96.3	1.33	1.0	0.613 ± 0.094	1.0000
0.00011	95.5	1.5	1.1	0.493 ± 0.033	1.0000
0.000156	67.1	8.43	6.4	0.500 ± 0.070	
0.000221	14.5	61.83	46.7	0.670 ± 0.190	
0.000312	0.0	99.8	75.3	50.000 ± 50.000	
0.000441	0.0	98.67	74.5	1000.000 ± 0.000	
0.000624	0.0	97.0	73.2		
0.000883	0.0	98.7	74.5	50.000 ± 0.000	
Trend p-Value				0.6676	
VIN <sup>3</sup>	81.4	5.25	4.0	3.315 ± 0.306	0.0010 *
Trial Summary: Negative					

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Test Type: Genetic Toxicology - In Vitro  
Micronucleus

Test Compound: Touchdown Total|Distilled Water

Time Report Requested: 14:23:49

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 <sup>1</sup>	100.0	3.03	1.0	0.424 ± 0.024	
0.000014	114.4	3.03	1.0	0.340 ± 0.087	1.0000
0.00002	114.8	3.13	1.0	0.373 ± 0.047	1.0000
0.000028	106.3	3.07	1.0	0.473 ± 0.048	1.0000
0.000039	120.8	3.03	1.0	0.473 ± 0.079	1.0000
0.000055	110.6	3.47	1.1	0.460 ± 0.031	1.0000
0.000079	106.7	3.27	1.1	0.580 ± 0.053	0.2367
0.00011	109.2	2.97	1.0	0.360 ± 0.070	1.0000
0.000156	87.5	3.07	1.0	0.540 ± 0.020	0.3910
0.000221	94.0	2.7	0.9	0.707 ± 0.075	0.0361
0.000312	52.9	6.3	2.1	1.347 ± 0.231	0.0072 *
0.000441	12.7	44.3	14.6	1.290 ± 0.720	
0.000624	1.1	85.33	28.2	100.670 ± 99.670	
0.000883	0.0	96.4	31.9		
Trend p-Value				< 0.001 *	
CPA <sup>4</sup>	46.9	11.83	3.9	3.135 ± 0.279	< 0.001 *
Trial Summary: Equivocal					

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Time Report Requested: 14:23:49

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 <sup>1</sup>	100.0	3.43	1.0	0.392 ± 0.019	
0.000028	98.0	3.23	0.9	0.267 ± 0.067	1.0000
0.000039	111.1	4.0	1.2	0.367 ± 0.035	1.0000
0.000055	112.5	3.4	1.0	0.293 ± 0.024	1.0000
0.000078	102.1	3.97	1.2	0.340 ± 0.031	1.0000
0.00011	97.2	3.7	1.1	0.360 ± 0.023	1.0000
0.000156	96.3	4.23	1.2	0.440 ± 0.053	1.0000
0.000221	101.5	3.87	1.1	0.393 ± 0.068	1.0000
0.000313	39.7	19.07	5.6	2.470 ± 1.740	
0.000442	11.4	46.73	13.6	3.940 ± 0.140	
0.000625	0.0				
0.000884	0.0	98.5	28.7		
0.00125	0.0	97.1	28.3	50.000 ± 0.000	
Trend p-Value				0.6091	
CPA <sup>4</sup>	51.5	11.38	3.3	4.400 ± 0.702	< 0.001 *
Trial Summary: Negative					

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LEGEND

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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 \*\***