NTP Study Number: G89024C

Cell Type: TK6

Study Result: Positive

Experiment Number: **G89024C**

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

G03: In Vitro Micronucleus Summary Data

Test Compound: **Metolachlor|DMSO**

Date Report Requested: **11/15/2021**

Time Report Requested: **11:57:18**

Duration: 4 h; Activation: Without S9

	% Relative Survival	% Apoptosis and Necrosis	Fold Change in Apoptosis and Necrosis	% MN	
Concentration (mM)	**Mean**	**Mean**	**Mean**	**Mean ± SEM**	**p-Value**
Vehicle Control[1]	100.0	3.35	1.0	1.384 ± 0.076	
0.0375	95.9	2.93	0.9	0.913 ± 0.048	1.0000
0.05303	103.3	3.1	0.9	1.180 ± 0.115	1.0000
0.075	105.3	3.2	1.0	1.220 ± 0.081	1.0000
0.10606	88.8	3.77	1.1	1.307 ± 0.035	1.0000
0.1299	88.7	3.67	1.1	1.440 ± 0.072	1.0000
0.15909	87.4	4.73	1.4	1.280 ± 0.142	1.0000
0.19485	82.9	5.27	1.6	1.327 ± 0.094	1.0000
0.23864	81.9	6.43	1.9	1.413 ± 0.183	1.0000
0.29227	79.0	7.27	2.2	1.680 ± 0.210	0.9727
0.35796	72.3	9.27	2.8	1.387 ± 0.052	1.0000
0.43841	50.4	14.0	4.2	1.330 ± 0.160	
0.62	31.0	27.1	8.1	1.710 ± 0.320	
Trend p-Value				0.1788	
VIN[2]	70.3	10.3	3.1	10.755 ± 1.059	0.0010 *

Trial Summary: Negative

Experiment Number: **G89024C**

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

G03: In Vitro Micronucleus Summary Data

Test Compound: **Metolachlor|DMSO**

Date Report Requested: **11/15/2021**

Time Report Requested: **11:57:18**

Duration: 24 h; Activation: Without S9

	% Relative Survival	% Apoptosis and Necrosis	Fold Change in Apoptosis and Necrosis	% MN	
Concentration (mM)	**Mean**	**Mean**	**Mean**	**Mean ± SEM**	**p-Value**
Vehicle Control[1]	100.0	4.26	1.0	0.733 ± 0.041	
0.0375	89.7	4.47	1.0	1.060 ± 0.122	0.2055
0.05303	99.2	4.63	1.1	0.867 ± 0.057	1.0000
0.075	104.2	5.93	1.4	1.193 ± 0.104	0.0297
0.10606	89.7	7.87	1.8	0.873 ± 0.087	1.0000
0.1299	82.0	9.23	2.2	1.200 ± 0.083	0.0317
0.15909	80.2	11.47	2.7	1.813 ± 0.134	0.0030 *
0.19485	54.7	16.53	3.9	2.393 ± 0.202	< 0.001 *
0.23864	40.9	22.13	5.2	6.150 ± 0.380	
0.29227	33.1	31.0	7.3	6.440 ± 0.570	
0.35796	15.1	47.57	11.2	4.710 ± 0.340	
0.43841	6.7	62.67	14.7	5.950 ± 1.140	
0.62	0.4	97.13	22.8	57.770 ± 11.330	
Trend p-Value				< 0.001 *	
VIN[3]	60.9	10.05	2.4	14.880 ± 0.896	0.0010 *

Trial Summary: Positive

Experiment Number: **G89024C**

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

G03: In Vitro Micronucleus Summary Data

Test Compound: **Metolachlor|DMSO**

Date Report Requested: **11/15/2021**

Time Report Requested: **11:57:18**

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

	% Relative Survival	% Apoptosis and Necrosis	Fold Change in Apoptosis and Necrosis	% MN	
Concentration (mM)	**Mean**	**Mean**	**Mean**	**Mean ± SEM**	**p-Value**
Vehicle Control[1]	100.0	3.73	1.0	0.447 ± 0.024	
0.05322	91.9	5.97	1.6	0.560 ± 0.053	0.2747
0.07527	99.6	5.03	1.3	0.407 ± 0.035	1.0000
0.10645	89.3	5.77	1.5	0.287 ± 0.064	1.0000
0.15054	77.1	8.67	2.3	0.413 ± 0.047	1.0000
0.18437	78.3	9.17	2.5	0.413 ± 0.094	1.0000
0.22581	67.8	12.43	3.3	0.407 ± 0.018	1.0000
0.27656	44.0	20.87	5.6	0.510 ± 0.080	
0.33871	28.8	30.0	8.0	0.700 ± 0.090	
0.41484	17.8	44.37	11.9	1.200 ± 0.180	
0.50807	18.9	39.33	10.5	1.760 ± 1.000	
0.62225	10.2	70.13	18.8	4.820 ± 3.590	
0.88	0.5	78.2	20.9	3.420 ± 0.000	
Trend p-Value				0.9014	
CPA[4]	49.6	10.67	2.9	2.953 ± 0.312	0.0029 *

Trial Summary: Negative

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 ± Standard Error Mean

Statistical analysis only performed on: % MN

Pairwise comparison with the vehicle control; values are significant at P <= 0.025 by Dunn's test

Positive control: pairwise comparison with the vehicle control; values are significant at P <= 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 <= 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: DMSO

2: Positive Control: 5 ng/mL Vinblastine sulfate

3: Positive Control: 0.75 ng/mL Vinblastine sulfate

4: Positive Control: 3 ug/mL Cyclophosphamide monohydrate

** END OF REPORT **