M15: Natural Killer Cell Activity

Study Number: I20263 Test Compound: Tris(chloropropyl) phosphate Date: 28 May 2024 DTTID: 104-016-002-000-4 CAS Number: 13674-84-5 Time: 5:36:46 PM

Study Type: Immune screening with perinatal exposure DTXSID: DTXSID201016652

Species/Strain: Rat/Harlan Sprague Dawley

F1 Males: Immunophenotyping

	Treatment Groups (ppm)						
	0	2500	5000	10000	15 (mg/kg CPS)		
NK Cell Activity (12.5:1)	$19.89 \pm 1.85[12]$	$15.72 \pm 1.20[12]$	$17.23 \pm 1.11[12]$	$17.67 \pm 1.16[11]$	$22.64 \pm 2.15[8]$		
NK Cell Activity (25:1)	$30.45 \pm 2.44[12]$	$25.37 \pm 1.66[12]$	$27.64 \pm 1.29[12]$	$29.25 \pm 1.58[11]$	$35.94 \pm 3.00[8]$		
NK Cell Activity (50:1)	$41.72 \pm 2.62[12]$	$37.53 \pm 2.00[12]$	$41.20 \pm 1.78[12]$	$41.96 \pm 1.74[11]$	$49.36 \pm 2.99[8]$		

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F1 Females: Immunophenotyping

	Treatment Groups (ppm)						
	0	2500	5000	10000	15 (mg/kg CPS)		
NK Cell Activity (12.5:1)	$16.55 \pm 1.68[12]$	$14.51 \pm 1.11[12]$	$19.66 \pm 1.73[12]$	$16.75 \pm 1.37[12]$	$18.47 \pm 1.77[8]$		
NK Cell Activity (25:1)	$25.99 \pm 2.19[12]$	$23.85 \pm 1.47[12]$	$30.92 \pm 2.59[12]$	$28.82 \pm 2.11[12]$	$31.18 \pm 2.70[8]$		
NK Cell Activity (50:1)	$36.68 \pm 2.57[12]$	$36.49 \pm 1.57[12]$	$42.63 \pm 2.85[12]$	$42.03 \pm 2.29[12]$	$45.41 \pm 2.41[8]$ *		

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LEGEND

Data are displayed as mean \pm SEM (N) of effector: target cell ratio unless otherwise noted.

NK Cell Activity is expressed as % target cell killing, calculated as ((Sample Cr^{51} Release - Spontaneous Cr^{51} Release)/(Total Cr^{51} Release - Spontaneous Cr^{51} Release)*100

Statistical analysis performed by Jonckheere (trend) and Shirley or Dunn (pairwise) tests. The positive control group (15 mg/kg CPS) was excluded from trend test

Statistical analysis for the positive control group (15 mg/kg CPS) compared to the vehicle control group was performed using the Wilcoxon rank sum test.

Statistical significance for the control group indicates a significant trend test.

Statistical significance for a treatment group indicates a significant pairwise test compared to the vehicle control group.

* Statistically significant at $P \le 0.05$

** Statistically significant at $P \le 0.01$

NK = Natural Killer

SEM = Standard Error of the Mean

SD = Study Day

CPS = Cyclophosphamide

Males from the vehicle control and treatment groups were removed on SD 97; females were removed on SD 89.

Animals from the positive control group (15 mg/kg CPS) were purchased from a commercial source, age matched to the F1 animals, and removed on the same day as the F1 animals.

** END OF REPORT **