

M15: Natural Killer Cell Activity

Study Number: I99067

DTTID: 103-002-003-000-9

Study Type: immune screening

Species/Strain: Rat/Harlan Sprague Dawley

Test Compound: Echinacea purpurea extract

CAS Number: 90028-20-9

DTXSID: DTXSID0031265

Date: 06 Jun 2025

Time: 10:58:21 AM

Females: NK/Pheno

	Treatment Groups						
	0 mg/kg	125 mg/kg	250 mg/kg	500 mg/kg	1000 mg/kg	2000 mg/kg	15 mg/kg CPS
NK Cell Activity (12.5:1)	4.98 ± 0.57[12]**	6.19 ± 1.52[12]	9.01 ± 1.34[12]	9.64 ± 1.84[12]	9.14 ± 1.71[12]	15.60 ± 1.46[12]**	15.69 ± 2.53[8]**
NK Cell Activity (25:1)	9.40 ± 0.95[12]**	11.27 ± 2.38[12]	15.85 ± 2.01[12]	16.26 ± 2.77[12]	15.34 ± 2.60[12]	25.40 ± 2.14[12]**	27.35 ± 4.12[8]**
NK Cell Activity (50:1)	15.98 ± 1.49[12]**	18.13 ± 3.35[12]	24.93 ± 2.84[12]	24.38 ± 3.56[12]	23.99 ± 3.52[12]	33.88 ± 2.58[12]**	36.71 ± 4.90[8]**

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LEGEND

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

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

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 $p \leq 0.05$

** Statistically significant at $p \leq 0.01$

NK = Natural Killer

SEM = Standard Error of the Mean

SD = Study Day

CPS = Cyclophosphamide

Females from the vehicle control and treatment groups were removed on SD 28.

** END OF REPORT **