Identification of G-CSF and IL-6 as Candidate Biomarkers of CBLB502's Efficacy as a Medical Radiation Countermeasure *Journal of Pharmacology and Experimental Therapeutics* 



Supplemental Figure S1. Additional cytokines induced by CBLB502 in non-irradiated ICR mice after i.m. injection. Timedependent changes in plasma cytokine levels in non-irradiated female ICR mice injected i.m. with either the vehicle or with the indicated doses of CBLB502. Each data point represents mean ± SD of cytokine concentration measured in plasma of 3 mice. G-CSF, IL-6, KC, IP-10, Eotaxin, IL-10, IL-1a, IL-1b, IL12p70, TNF, GM-CSF, TPO, SCF were tested. IL-1a, IL-1b, IL12p70, TNF, GM-CSF, TPO, SCF did not display substantial or consistent response. IL-10 had shown very minor response.

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Supplemental Figure S2. Additional cytokines induced by CBLB502 in non-irradiated C57BL/6J mice after s.c. injection. Time-dependent changes in plasma cytokines levels in non-irradiated female C57BL/6J mice injected s.c. with either the vehicle or with the indicated doses of CBLB502. Each data point represents mean ± SD of cytokine concentration measured in plasma of 6 mice. G-CSF, IL-6, KC, IL-10, IL12p40, TNF, MCP-1, MIP-2, MIG were tested. IL-10 showed a very minor response. TNF did not show a consistent response. One outlier sample (vehicle/16 h, very high levels of MIG and MIP-2) was excluded.

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Supplemental Figure S3. Additional cytokines induced by CBLB502 in non-irradiated beagle dogs after i.m. injection. Time-dependent changes in plasma cytokine levels in non-irradiated male and female beagle dogs (n=6, 1:1 sex ratio) injected i.m. with either the vehicle or with the indicated doses of CBLB502. Each data point represents mean  $\pm$  SD. IL-6, IL-8, IL-10, and TNF were tested; all showed a CBLB502-dependent response.

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Supplemental Figure S4. Additional cytokines and other factors induced by CBLB502 in non-irradiated rhesus macaques after i.m. injection. Time-dependent changes in levels of plasma cytokines and other factors in non-irradiated male and female rhesus macaques (n=6, 1:1 sex ratio) injected i.m. with either the vehicle or with the indicated doses of CBLB502. Each data point represents mean ± SD. G-CSF, IL-6, IL-8, IL-10, C-reactive protein, IL-1b, IL12p70, IP-10, GM-CSF were tested. IL-1b, IL12p70, IP-10, GM-CSF did not display substantial or consistent responses. IL-10 showed a very minor response. However, this was later found to be assay-related in later studies, with larger-scale IL-10 responses observed with newer assays.

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**Supplemental Table S1**. Effect of 60  $\mu$ g/kg CBLB502 treatment administered s.c. or i.v. 24 hours after 8.5-9.5 Gy TBI on survival of irradiated C57BL/6J mice.

	TBI dose (Gy)	30-day survival (% and fraction)			Absolute	
Route		vehicle	CBLB502	control	survival increase, %	Vdds ratio vs. control
S.C.	8.5	52.5% (21/40)	85.0% (34/40)	0.003	+32.5%	5.1
	9	22.5% (9/40)	45.0% (18/40)	0.058	+22.5%	2.8
	9.5	7.5% (3/40)	27.5% (11/40)	0.037	+20.0%	4.7
i.v.	8.5	82.5% (33/40)	97.5% (39/40)	0.015	+15.0%	8.3
	9	55.0% (22/40)	80.0% (32/40)	0.031	+25.0%	3.3
	9.5	10.0% (4/40)	45.0% (18/40)	0.0009	+35.0%	7.4