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Technical Data Sheet: BDCM NFκB-Luc2

ATCC® Number	CRL-2740-NFκB-LUC2™
Organism	*Homo sapiens*
Tissue/Disease Source	Peripheral blood/ Acute myelogenous leukemia
Product Description	BDCM (ATCC® CRL-2740) a B lymphoblast cell line that was isolated from the peripheral blood of a male patient with acute myelogenous leukemia. This cell line was deposited by RA Steinman. BDCM NFκB-LUC2 luciferase reporter cell line was derived from parental line BDCM by stably expressing firefly luciferase gene (luc2) under control of the nuclear factor kappa B (NFκB) promoter. This cell line was established through lentiviral transduction and single cell cloning. The cells, upon stimulation, express high levels of enzymatically active luciferase protein, which can be detected via *in vitro* bioluminescence assays. This reporter cell line is useful for monitoring the activity of tumor necrosis factor alpha (TNF-α)-induced signal transduction pathways.
Application	Enabling sensitive and quantitative assessment of signal transduction makes this reporter cell line ideal for in vitro bioluminescence assays to study immune response in cell lines with high expression of LILRB1 and B7-1, development of new drugs, and safety evaluation of new chemicals and drugs.

Decrease in luciferase expression upon NFκB signaling inhibitor treatment

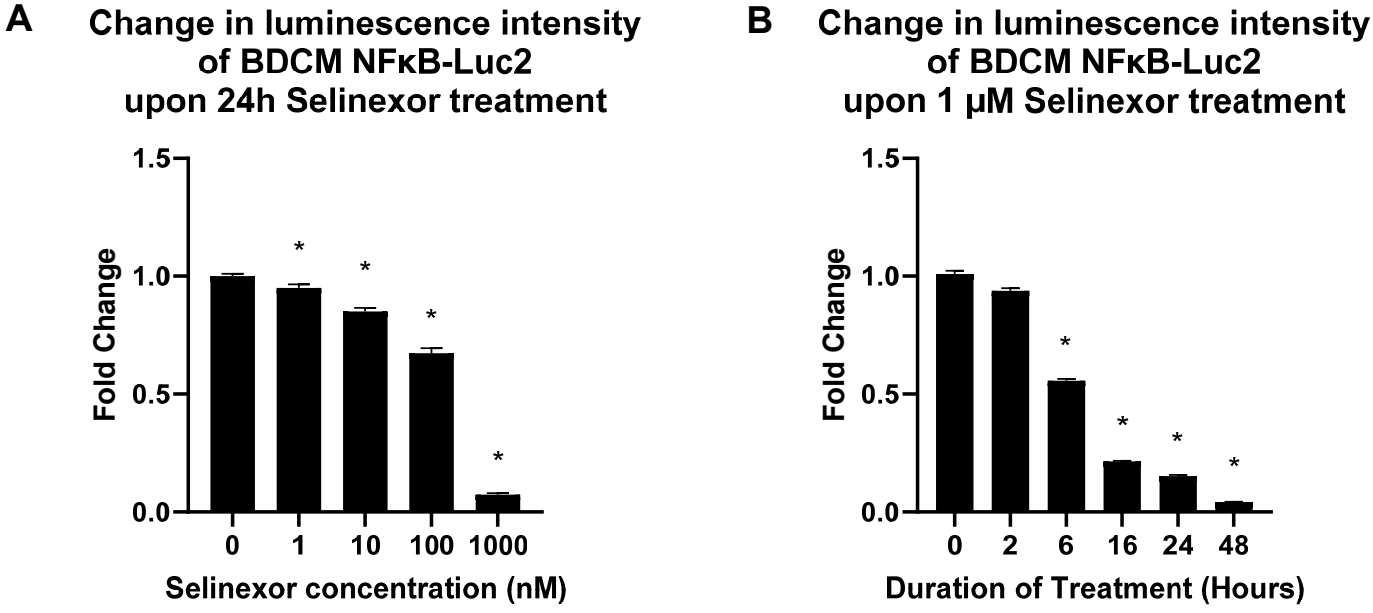


Figure 1. Decrease in in vitro expression of luciferase by NFκB signaling inhibitor treatment. Luciferase expression from BDCM NFκB-Luc2 cells upon NFκB signaling inhibition by treatment with (A) various concentrations of Selinexor (0.01 – 1,000 ng/ mL) for 24 hours and (B) 1 µM Selinexor for varying durations (0 – 48 hours). N=3 in all experiments. *, $P < 0.05$.

Biomarker expression

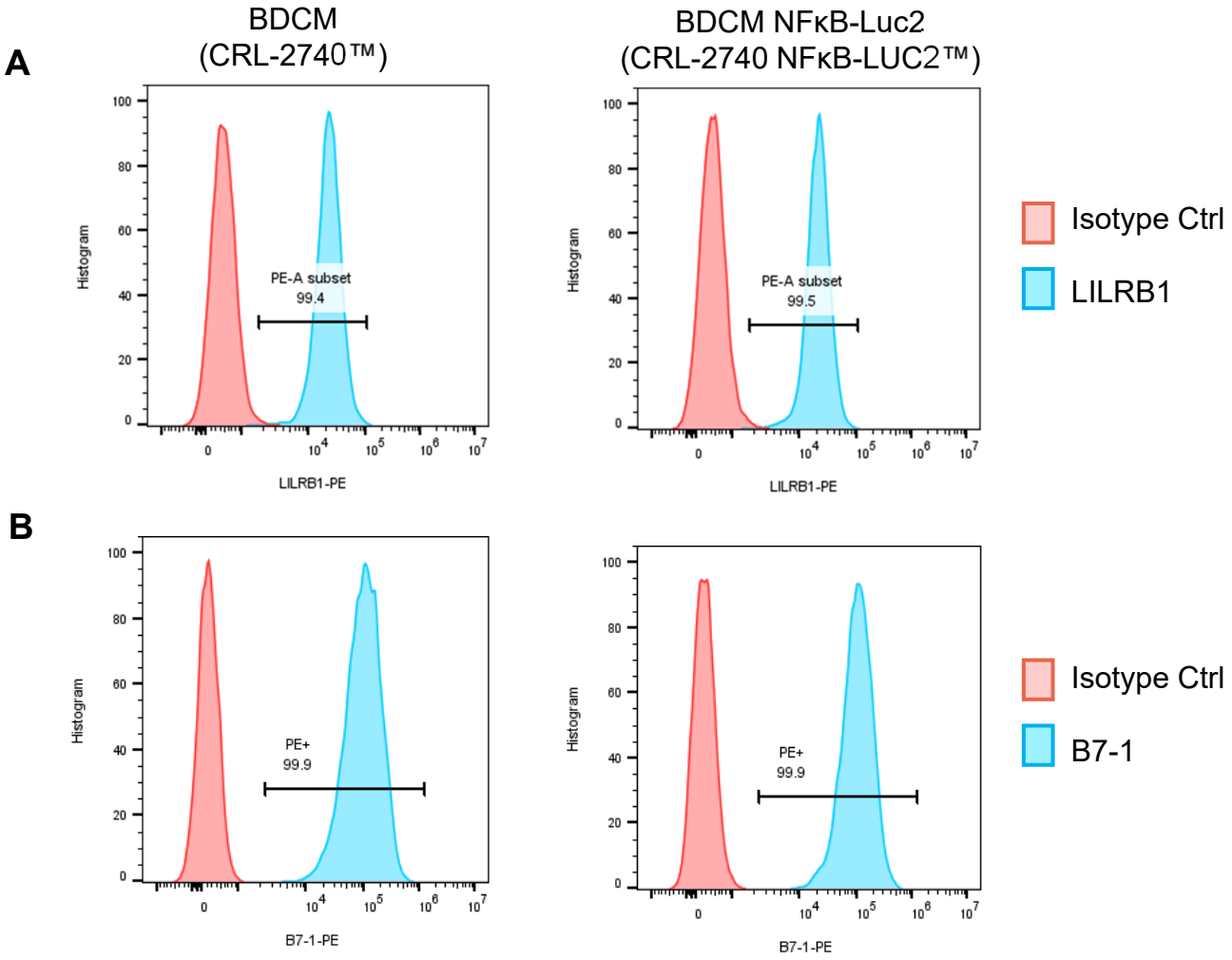
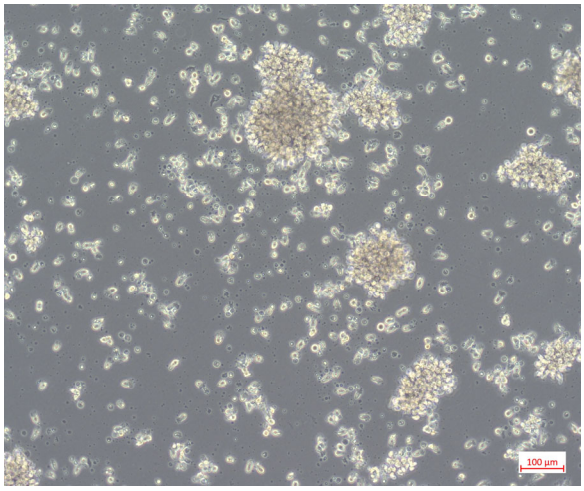


Figure 3. Biomarker expression of HMC3 parental and HMC3 NFκB-Luc2. The expression of (A) LILRB1 and (B) B7-1 on the cell surface of HMC3 parental and NFκB-Luc2 cell lines was evaluated by flow cytometry.

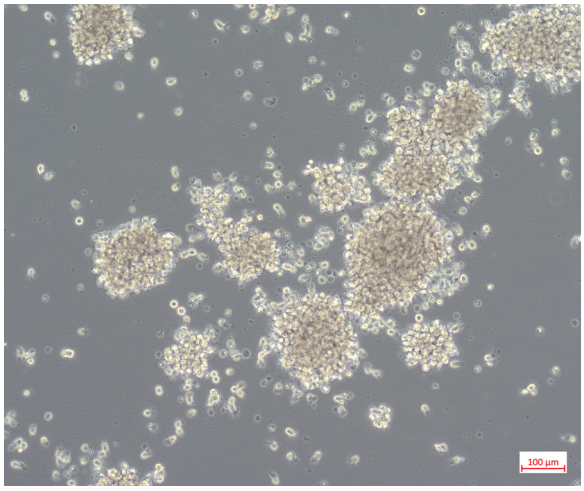
Cell Morphology

BDCM
(CRL-2740™)



Doubling time = 36.9 hours

BDCM NFκB-Luc2
(CRL-2740 NFκB-LUC2™)



Doubling time = 34.0 hours

Figure 4: Cell morphology of BDCM parental and BDCM NFκB-Luc2. Cells were maintained in ATCC recommended culture conditions. Cell morphology was observed under microscopy and images were captured by digital camera. Scale bars represent 100 µm.