

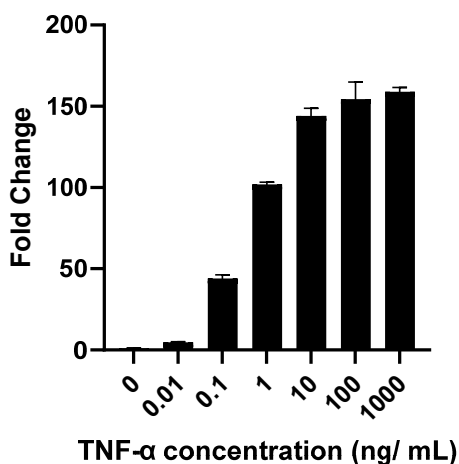
Technical Data Sheet:

KG-1 NFκB-Luc2

| | |
|------------------------------|---|
| ATCC® Number | CCL-246-NFκB-LUC2™ |
| Organism | <i>Homo sapiens</i> |
| Tissue/Disease Source | Bone marrow/ Acute myelogenous leukemia |
| Product Description | <p>KG-1 (ATCC® CCL-246™) is a cell line made up of macrophages isolated from a bone marrow aspirate obtained from a white, 59-year-old male with erythroleukemia that evolved into acute myelogenous leukemia. KG-1 NFκB-LUC2 luciferase reporter cell line was derived from parental line KG-1 by stably expressing firefly luciferase gene (<i>luc2</i>) 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 <i>in vitro</i> bioluminescence assays. This reporter cell line is useful for monitoring the activity of tumor necrosis factor alpha (TNF-α)-induced signal transduction pathways.</p> |
| Application | <p>Enabling sensitive and quantitative assessment of signal transduction makes this reporter cell line ideal for <i>in vitro</i> bioluminescence assays to study immune response in cell lines with high expression of Siglec-10, development of new drugs, and safety evaluation of new chemicals and drugs.</p> |

In vitro expression of luciferase by TNF-α and T cell-conditioned media

A Luminescence signal from KG-1 NFκB-Luc2 upon TNF-α stimulation (Fold change)



B Luminescence intensity of KG-1-NFκB-Luc2 upon T cell-conditioned media stimulation

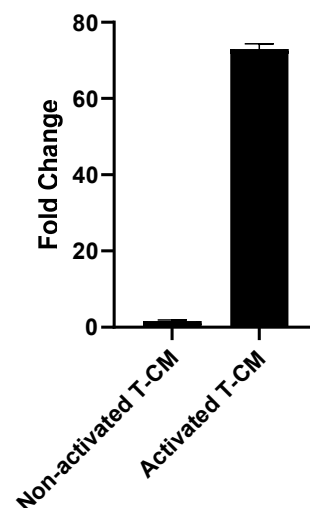


Figure 1. In vitro expression of luciferase by TNF-α and T cell-conditioned media. Luciferase expression from KG-1 NFκB-Luc2 cells upon signaling activation by (A) TNF-α stimulation (0.01 – 1,000 ng/ mL), (B) conditioned-media stimulation from checkpoint matched non-activated and activated primary CD8+ T cells. N=3 in all experiments. *, P < 0.05.

In vitro expression of luciferase in co-culture assay

Luminescence signal from KG-1 NFκB-Luc2 upon co-culture w/ CD4+ T cells

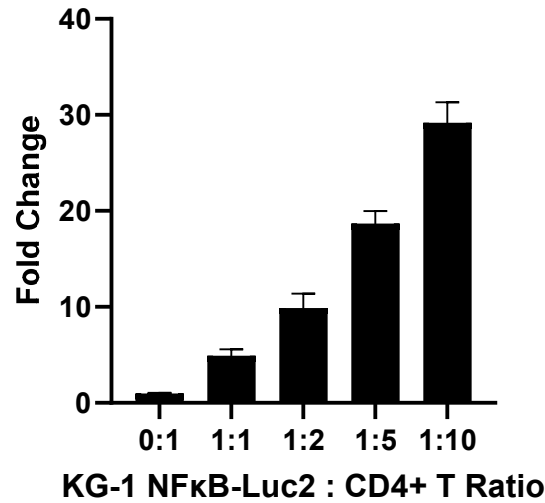


Figure 2. In vitro expression of luciferase in co-culture assay. KG-1 NFκB-Luc2 cells were co-cultured with varying ratios of primary CD4+ T cells for 24 hours. N=3 in all experiments. *, P < 0.05.

Biomarker expression

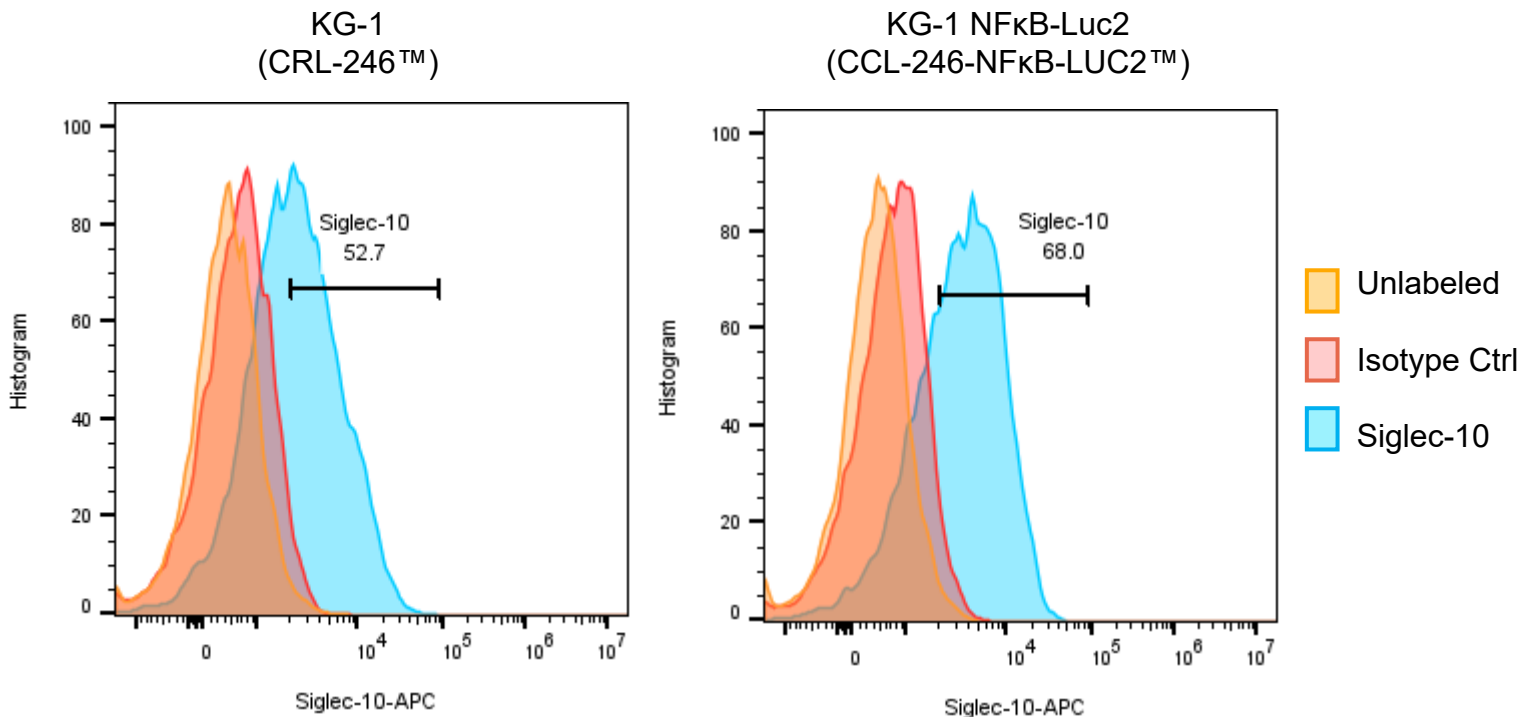
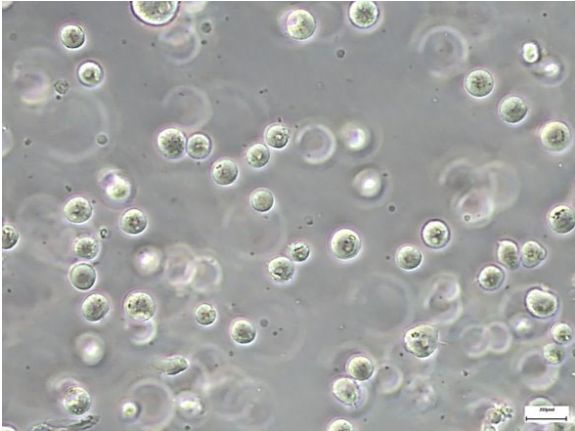


Figure 3. Biomarker expression of KG-1 parental and KG-1 NFκB-Luc2. The expression of Siglec-10 on the cell surface of KG-1 parental and NFκB-Luc2 cell lines was evaluated by flow cytometry.

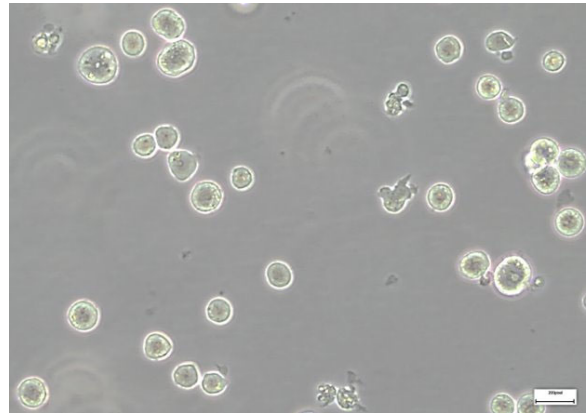
Cell Morphology

KG-1
(CCL-246™)



Doubling time = 38.6 hours

KG-1 NFκB-Luc2
(CCL-246 NFκB-LUC2™)



Doubling time = 38.9 hours

Figure 4: Cell morphology of KG-1 parental and KG-1 NFκB-Luc2. Cells were maintained in ATCC recommended culture conditions. Cell morphology was observed under microscopy and images were captured by digital camera.

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