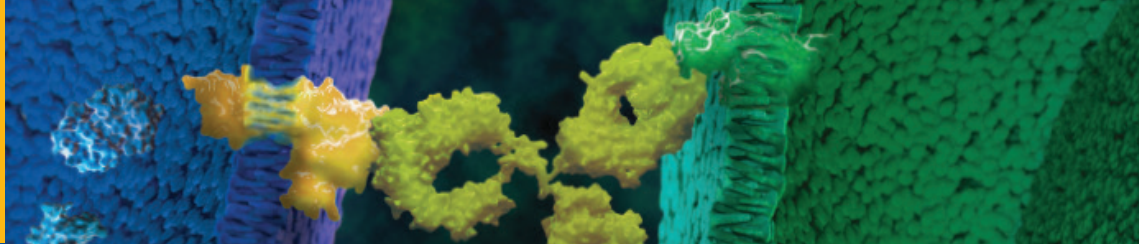
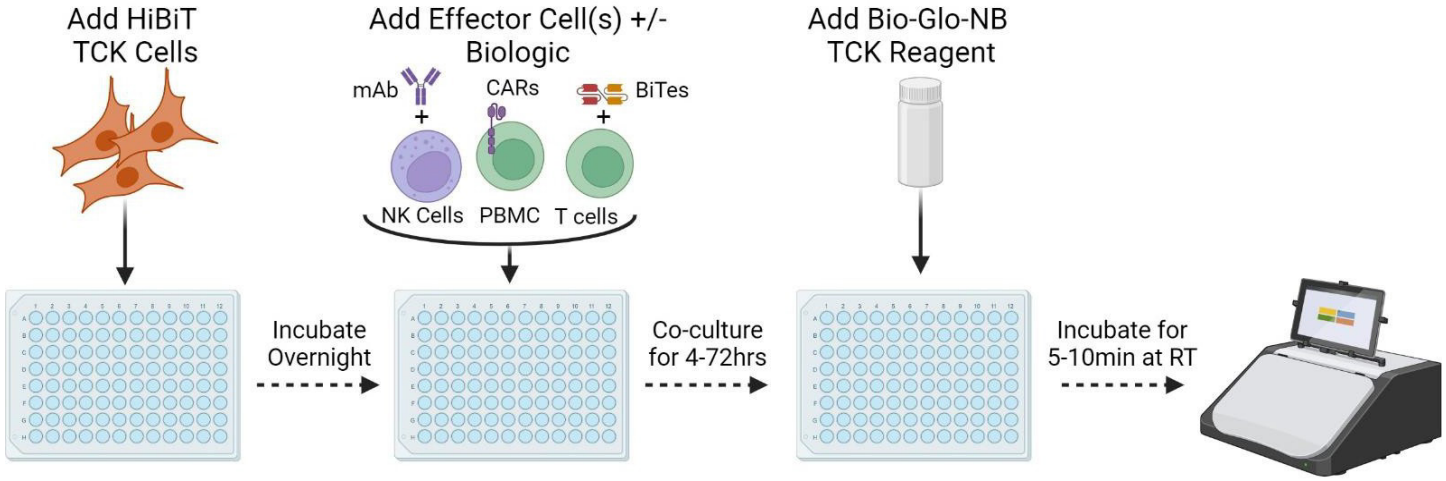


HiBiT Target Cell Killing Bioassays: Improving Cell Killing Assays



The efficacy of biologic-based immunotherapies relies on their ability to induce apoptosis and cell death through the recruitment and activation of immune effector cells. Common cell killing assays (using fluorescent dyes) suffer from i) long processing/handling times, ii) low sensitivity and high background, and iii) complicated analyses with no standardization.

To promote the efficient and precise analysis of biologic immunotherapies in this rapidly growing field, the Target Cell Killing (TCK) Bioassay has been developed to provide a reliable option for immunotherapy potency testing.

The HiBiT Target Cell Killing (TCK) Bioassays includes a target cancer cell engineered to express a HiBiT fusion protein that remains intracellular until cell lysis. Upon permeabilization by cell death and membrane disruption, HiBiT is released into the media where it binds with high affinity to its LgBiT counterpart to form the functional NanoBiT luciferase. The resulting luminescent signal is proportional to the number of dead cells in the culture and is specific to target cell death.

Features and Benefits:

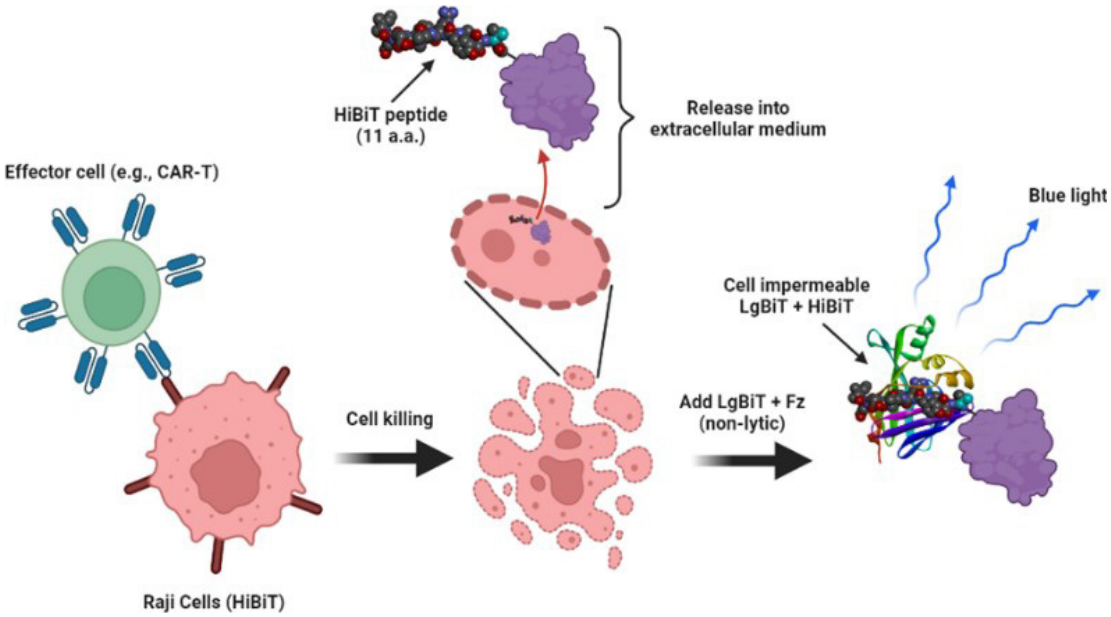
I. **Faster Processing Times:** zero up-front preparation of the target cells, no washing steps, and a readout in <30min

II. **Dynamic Signal-to-Noise Ratio:** quantification from as little as 2,000 cells with minimal background that is specific for the target cells

III. **Simple Analysis:** efficient formula to determine "% specific lysis" with the untouched effector cells available for further downstream analysis

Comparing Cytotoxicity Assays	HiBiT TCK	Flow Cytometry	Fluore-scent Dyes
Processing Time			
Signal: Noise		–	
Analysis			

TCK Bioassay offers a rapid and simple workflow compared to alternative cell- mediated cytotoxicity assays



Explore our growing list of TCK Bioassays:

Blood Cancer Targets

- B cell Lymphoma/Leukemia lines (Raji & Ramos) expressing CD19, CD20 and CD22 as well as CD19-KO, CD20-KO, and CD19/20-KO.
- Myeloid Leukemia line (U937 & K562) expressing CD33 and CLL-1.
- Multiple Myeloma line (H929) expressing BCMA and CD38.

Solid Cancer Targets

- Ovarian Carcinoma lines (OVCAR3 & SKOV3) expressing HER2, MSLN, 5T4, WT and MUC16.
- Breast Adenocarcinoma line (SK-BR-3) expressing HER2 and EpCAM
- Lung Carcinoma line (A549) expressing EGFR
- Melanoma line (A375) expressing HER2, CD70, B7-H3

Exogenously Expressed Targets

- K562 cells expressing CD19, BCMA and CIITA
- CHO-K1 cells expressing Claudin 18.2, Membrane TNFα, SARS-CoV-2 Spike Protein

Effector Cells

- Primary Human PBMC, CD8 T cells and Macrophages!

Join the
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Contact our
Tailored R&D Solutions
to generate additional TCK lines!

Check our
Cell Health portfolio
to measure viability in response to small molecule inhibitors!

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