



CELL-BASED ASSAYS

OVERVIEW

- Large collection of cancer cell lines (120 cell lines)
- We work with primary human cells (PBMC and others) and whole human blood
- Cytotoxicity assays
- Target engagement assays
- Phospho-Protein assays
- Cytokine secretion assays
- Multiplex Flow cytometry assays
- In cell ELISA assays
- New cell assay development
- Production of stable cell lines expressing protein of interest (lentiviral delivery)

CYTOTOXICITY ASSAYS

- Cell viability/proliferation
 - Cell-titer Glo
 - Presto Blue
 - MTT/XTT
 - MTS-based platelet viability assay
 - BrdU incorporation
- Apoptosis /Necrosis
 - LDH release
 - Cytochrome C release
 - Caspase 3/7 activation
 - Annexin V/phosphatidylserine

These assays can be performed in a wide variety of cell types, including our in house collection of 120 cancer cell lines.

CYTOKINE ASSAYS

- Cytokine secretion ELISAs
 - TNFa
 - IL1b
 - IL2
 - IL6
 - IL10
 - IL12p40
 - IL23
 - IFNg
 - IFNb

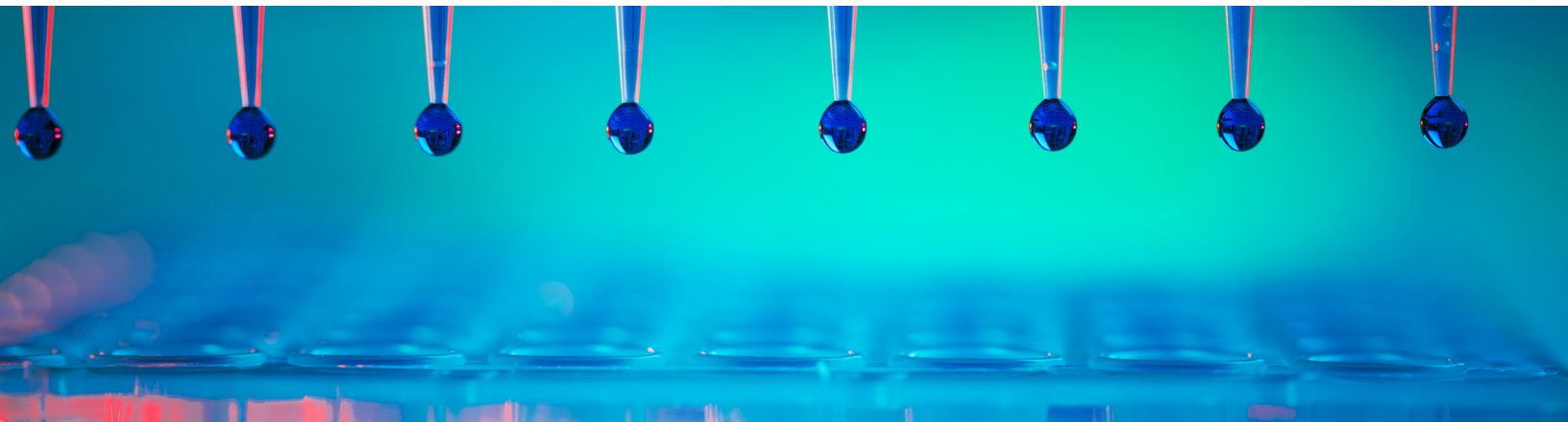
These assays are typically performed in normal human peripheral blood cells (PBMCs) or in whole human blood.

TARGET ENGAGEMENT ASSAYS

- NanoBRET TE assays
 - >100 kinase targets is available
- Active site occupancy assays
 - Kinase occupancy assays with Ibrutinib-Biotin as a probe
 - Proteasome occupancy assays with biotinylated PABP probe
- Target degradation assays
 - BTK, EGFR, FGFR, CDK degradation assays (HTRF and Western)
 - MDM2 degradation assay (Western)
 - BCL6 degradation assay (Western)

NanoBRET assays are typically performed in HEK293 and HeLa cells, but can be performed in a wide variety of well-transfectable cell lines.

Active site occupancy and degradation assays can be performed in a variety of cell types, including our in house collection of 120 cancer cell lines, but also in PBMCs and animal tissues.



PHOSPHO-PROTEIN AND DOWNSTREAM KINASE TARGETS ASSAYS

- HTRF based assays
 - P-CREB
 - P-p38
 - P-JNK
 - P-BTK
 - P-ERK
- Flow cytometry
 - CD69 expression in B-cells (whole blood)
 - P-p38 in whole blood
 - P-STAT in whole blood
 - Autophagy assays

These assays can be performed in a wide variety of relevant cell types, including our in house collection of 120 cancer cell lines, PBMCs and in whole human blood.

DISCOVERY BIOLOGY SERVICES – DETECTION TECHNOLOGIES

- Time-resolved fluorescence HTRF
- Bioluminescence energy transfer BRET
- UPLC/MS/MS
- ADP/GTP/Cell-Titer-Glo
- Flow Cytometry
- Microfluidic electrophoresis

DISCOVERY BIOLOGY SERVICES – INSTRUMENTATION

- LabChip300 Capillary Electrophoresis system
 - Used for assay development and MoA studies
- BioTek Synergy Neo2 multimode plate reader
 - Used for most of cell-based assays, kinases, and other biochemical and binding assays
- CytoFLEX flow-cytometer
 - Used for cellular and whole blood assays
- Labcyte Echo 550
 - Used to deliver compounds to biochemical and cell-based assays
- Sciex qutrapp 550 with Nexera UHPLC
 - Used bio-analytical studies