vivia
BIOTECH

Overview

Vivia provides functional Native Environemnt assays for your antiproliferative drug and biomarker discovery & development, enabling a faster and more focused identification of specific mechanism of action of your drug.

Click to learn more

Click for custom assays in solid tumors

Click for custom assays in hematological malignancies

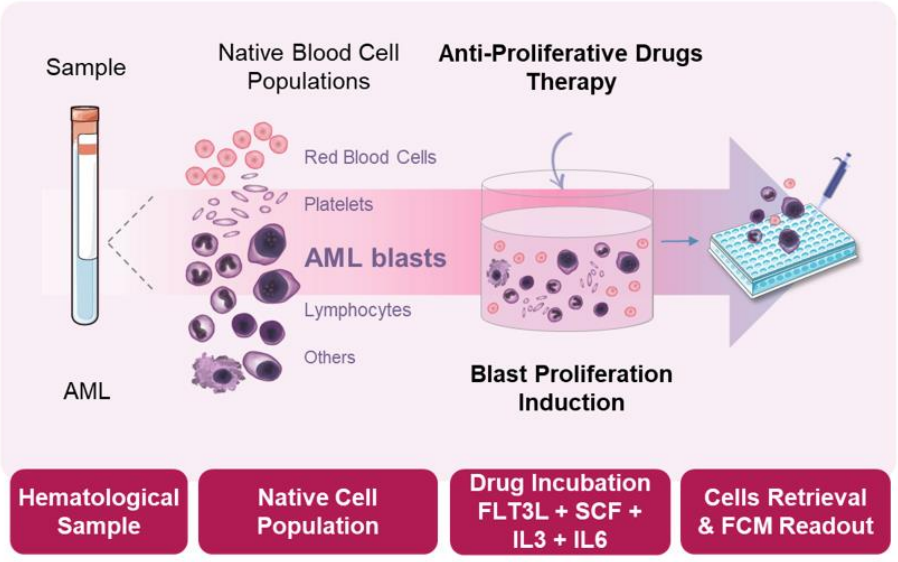
Santiago Grisolia 2
28760 . Madrid . Spain
(+34) 91 129 3151
admin@viviabiotech.com
www.viviabiotech.com

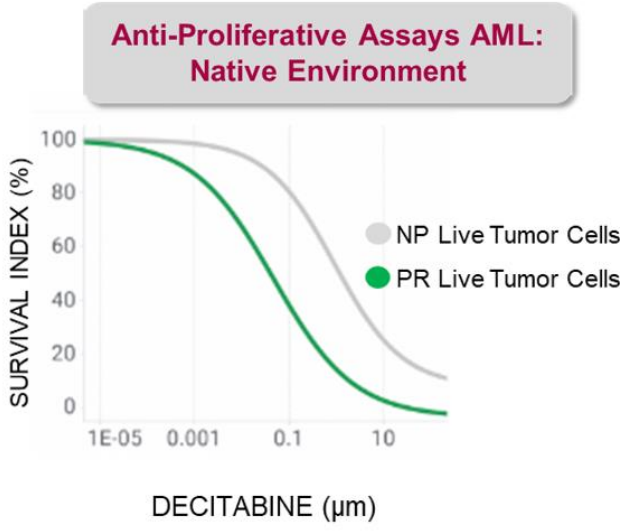
Proliferation Assays in Hematological Patient Samples

Antiproliferative drug effect on Hematological Malignancies are detected only in proliferation assays. Vivia's Native Environment (NE) proliferation assays capture the activity of those compounds in which cell cycle arrest is suspected to be more relevant than depletion.

ACUTE MYELOID LEUKEMIA

The drug effect is measured on both the proliferating and non-proliferating cell subsets. For cell proliferation analysis, CFDA or CTV staining in conjunction with the immunophenotype allows the analysis of both viability (Annexin-V negative) and proliferation (CFDA or CTV peaks) of the blast cells.





Antiproliferation assay on AML samples may capture activity of hypomethylating drugs azacytidine & decitabine and is only detected in cytokine proliferation assay

vivia
BIOTECH

Overview

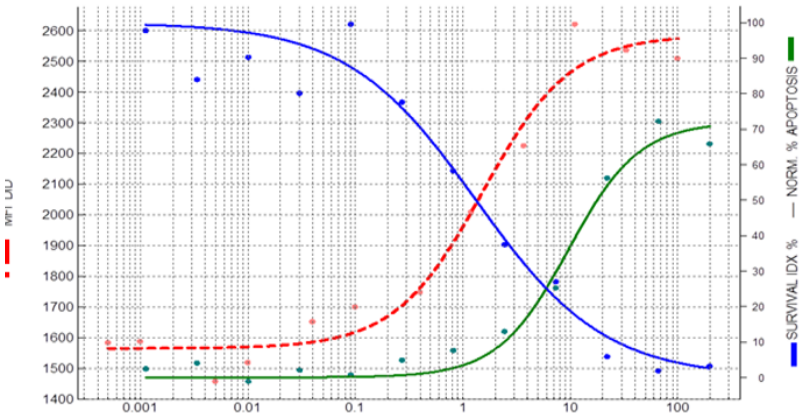
Vivia provides functional Native Environemnt assays for your antiproliferative drug and biomarker discovery & development, enabling a faster and more focused identification of specific mechanism of action of your drug.

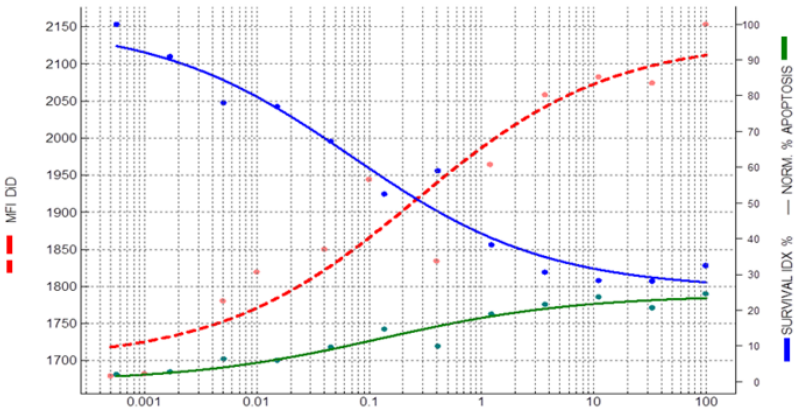
Click to learn more

Click for custom assays in solid tumors

Click for custom assays in hematological malignancies

Santiago Grisolia 2
28760 . Madrid . Spain
(+34) 91 129 3151
admin@viviabiotech.com
www.viviabiotech.com

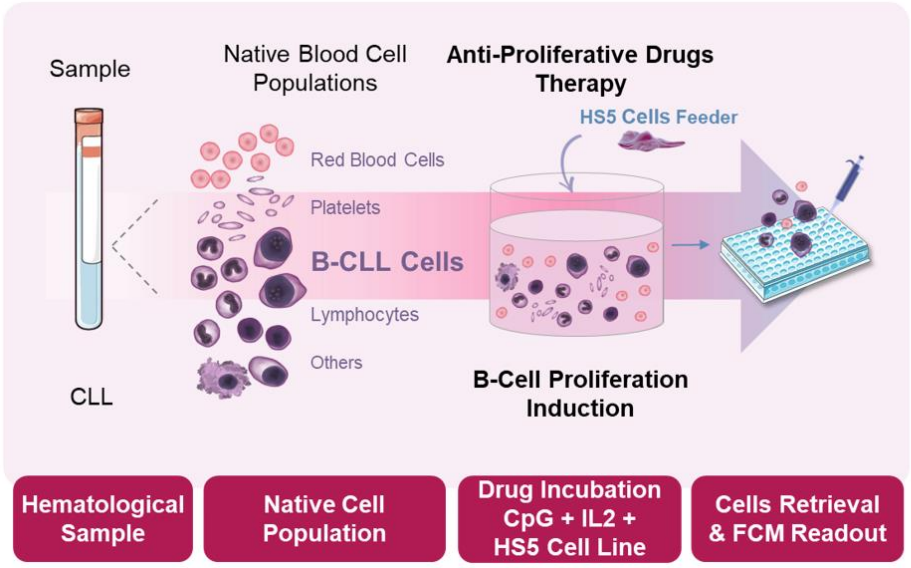




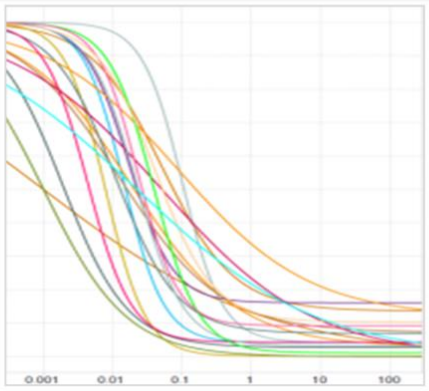
At high doses azacytidine and decitabine behave as cytotoxic drugs (apoptotic curves in green), while at clinically low doses the hypomethylation are related to cell arrest, antiproliferation (blue curves). Proliferation assay reveals that is more prevalent antiproliferation drug effect (blue) than apoptosis (green). Cell division detected with dye (red curve) mimics depletion on dividing cells (blue), different than apoptosis (green).

CHRONIC LYMPHOCYTIC LEUKEMIA

To more closely reproduce and re-create the complexity of the in vivo microenvironment in CLL, we have developed an ex vivo assay that best promotes CLL proliferation and viability. The combination of CpG + IL-2 + HS5 stromal cells approximates a lymph node environment.



Anti-Proliferative Assays CLL: Native Environment



Idelalisib [µM]

vivia
BIOTECH

Overview

Vivia provides functional Native Environemnt assays for your antiproliferative drug and biomarker discovery & development, enabling a faster and more focused identification of specific mechanism of action of your drug.

Click to learn more

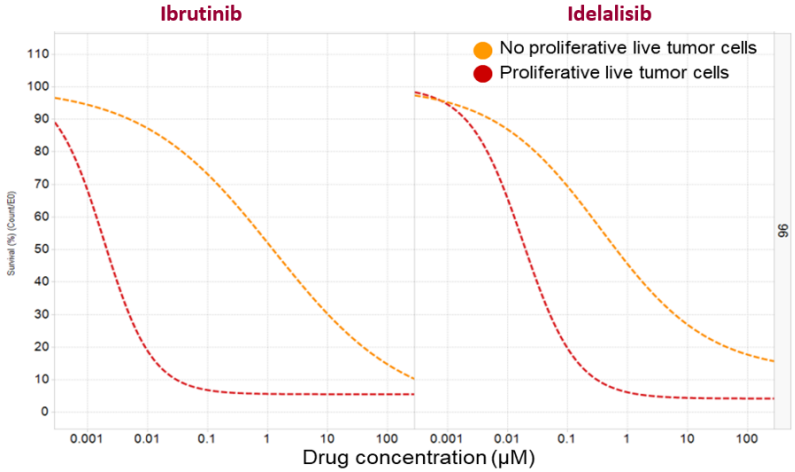
Click for custom assays in solid tumors

Click for custom assays in hematological malignancies

Santiago Grisolia 2
28760 . Madrid . Spain
(+34) 91 129 3151
admin@viviabiotech.com
www.viviabiotech.com

www.oncotarget.com Oncotarget, 2018, Vol. 9, (No. 40), pp: 26019-26031
Research Paper

A novel *ex vivo* high-throughput assay reveals antiproliferative effects of idelalisib and ibrutinib in chronic lymphocytic leukemia



Median dose responses show Idelalisib & Ibrutinib are antiproliferative agents.
New MOA can explain clinical profiles.
BCR inhibitors comparison most valuable if it can explore & predict best combinations

Highlights

- Vivia's NE antiproliferation assays may capture activity of hypomethylating drugs in AML patients
- Antiproliferative effect are only detected in cytokine proliferation assays
- Same antiproliferation assay also works in Myelodysplastic Syndromes (MDS)
- Dose response on all leukemic cells can be broken into Proliferative (PR) & Non-proliferative (NP) cells
- Antiproliferative drugs are identified because they are more active on PR vs NP cells
- In NP cells we measure depletion or cytotoxicity. The NE antiproliferation assays measure both proliferation and depletion
- Suitable for cryopreserved leukemia samples adding NE from fresh samples