PHILIPS

OncoSignal

Now available: **OncoSignal tests for pre-clinical research***

Assessing drug efficacy by quantitative determination of functional activity of tumor-driving signal transduction pathways in cell cultures and PDX models.

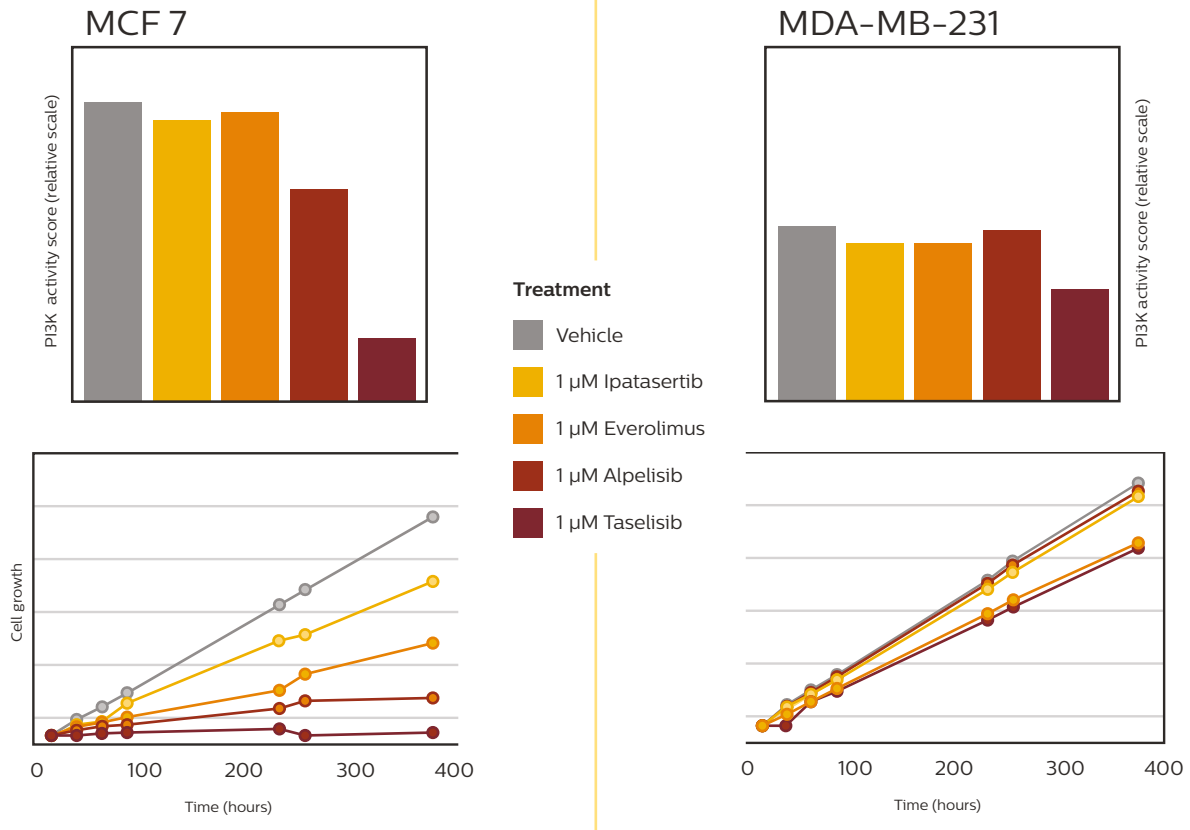
10-15 Signal transduction pathways are known to drive cancer growth. Testing "down-stream" for mRNA transcription of the target genes of pathways OncoSignal enables functional assessment of pathway activity in tumor samples. Here we illustrate how quantitative measurement of pathway activity may help gain insight into tumor biology as a prelude to clinical studies.

The OncoSignal service testing lab is ready to test your samples: A pathway activity report will show activity scores of pathways in the cell lines or PDX models of your study. OncoSignal pathway analysis supports the optimal design of your pre-clinical study by:

- helping to select the best cell lines and PDX models,
- assessing variability in test systems,
- determining the efficacy of targeted drugs.

OncoSignal in cell culture models: selection of the optimal cell line and measurement of the tumor inhibiting effect

OncoSignal reveals differences in PI3K pathway activity in *MCF7 and MDA-MB-231 breast cancer cell lines* treated with various drugs (mTOR/AKT/PI3K inhibitors) compared to the vehicle (upper panels). Corresponding cell growth in lower panels.

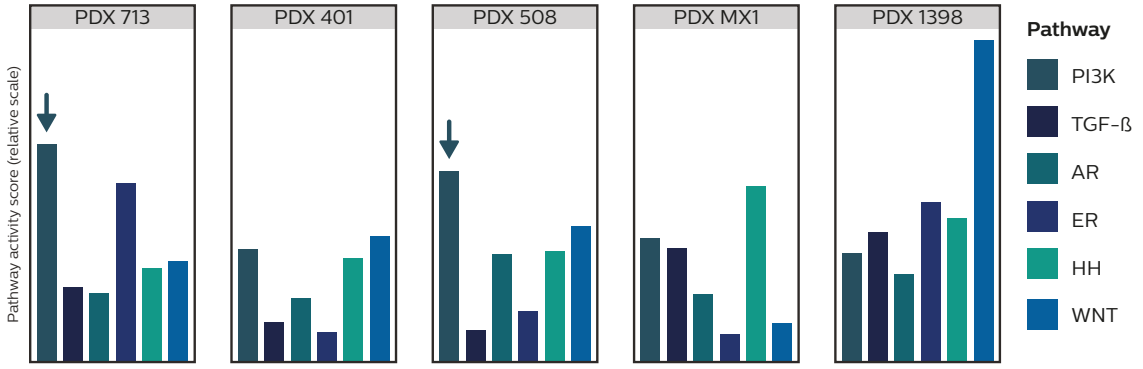


In the MCF7 cell line with higher initial PI3K activity, drug-induced inhibition of PI3K pathway activity corresponds to inhibition of cell growth. In the MDA-MB-231 cell line with lower initial PI3K activity, drugs are less effective.

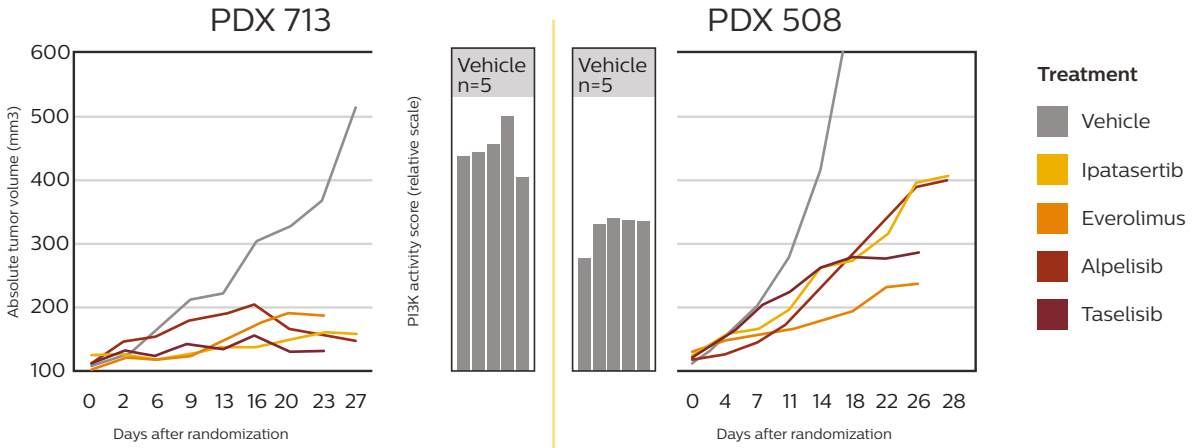
**Not for clinical use – for research use only*

OncoSignal in PDX models: designing the optimal experiment to test your targeted drug

Activity of different signaling pathways in PDX models (Charles River Laboratories). Depending on the postulated mode of action of the drug, OncoSignal may help select the PDX model with the optimal pathway activity profile. Based on the activity profiles depicted below, the PDX 713 and 508 models were selected to test PI3K inhibiting drugs.



Lower panel: The two selected PDX models show relatively high PI3K pathway activity in the vehicle group and reduction of pathway activity in the treated groups (data not shown), which coincides with a reduction in tumor growth by various PI3K inhibitors. In the PDX 713 model with the highest PI3K activity in the vehicle group, an almost complete tumor growth inhibition was observed. The PDX 508 model with lower PI3K activity showed less inhibition, stressing the value of OncoSignal testing in the course of your experiment.



Benefits

- Available for testing on cell cultures, 3D models and PDX models.
- Applicable to multiple cancer types and available for multiple pathways.
- Tailored service adapted to the specific requirements of your pre-clinical study.
- For other applications, see www.philips.com/oncosignal.

Request your tailored offer from our OncoSignal service lab

Upon request, dedicated tests can also be made available for your own facilities.
For more information, please contact: jos.rijntjes@philips.com.

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