Cellular Phosphorylation Assays



Available cellular phosphorylation assays to screen your compounds

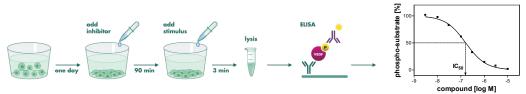
We are kinase experts and believe that especially in the field of rationale drug development of small molecule kinase inhibitors, a compound ranking based on cellular data is pivotal for the decision on further preclinical testing. After *in vitro* kinase profiling of your compounds a similar experimental setting based on cellular phosphorylation assays will substantially increase your knowledge on which one of your inhibitors are still blocking the kinase in the cellular context. In addition, cell-based test systems offer the advantage of physiological ATP concentrations at the site of action and the phosphorylation of physiological substrates.

Generally, cells are preincubated with test compounds to allow thorough target binding. In case of receptor tyrosine kinases we determine the autophosphorylation level, for serine/threonine kinases we have developed assays that allow the quantification of phospho-levels of the immediate downstream substrate. Please check for your kinase of interest.

Cellular phosphorylation assays complement your rational drug development

AKT1 Rat1-myrAKT1 yes Ser/Thr Kinase human / rat GSK3-beta ALK Karpas-299 no RTK human / human ALK (autophosphorylation) Aurora-B HT-29 no Ser/Thr Kinase human / human Histone H3 AXL MEF-AXL yes RTK human / mouse AXL (autophosphorylation) BCR-ABL K562 no RTK human / human BCR-ABL (autophosphorylation) B-RAF-VE Rat1-B-RAF-VE yes Ser/Thr Kinase human / human EGF-R (autophosphorylation) B-RAF-VE RA431 no RTK human / human EGF-R (autophosphorylation) EGF-R A431 no RTK human / nouse EPH84 (autophosphorylation) EGF-R MEF-EPH84 yes RTK human / mouse EPH84 (autophosphorylation) ERBB2 NIH373-ERB2 yes RTK human / mouse ERB84 (autophosphorylation) ERBB4 147D no RTK human / mouse FAK (autophosphorylation)	Kinase	Cell Line	Transfected	Type of Kinase	Origin: Kinase / Cell Line	Quantified phospho-Protein
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	PDGFR-beta	NIH3T3	no	RTK	mouse / mouse	PDGFR-beta (autophosphorylation)
PIM2 HEK293 yes Ser/Thr Kinase human / human Bad	PIM1	HEK293	yes	Ser/Thr Kinase	human / human	Bad
	PIM2	HEK293	yes	Ser/Thr Kinase	human / human	Bad
PIM3 HEK293 yes Ser/Thr Kinase human / human Bad	PIM3	HEK293	yes	Ser/Thr Kinase	human / human	Bad
ROCK A7r5 no Ser/Thr Kinase rat / rat Myosin light chain	ROCK	A7r5	no	Ser/Thr Kinase	rat / rat	Myosin light chain
RON T47D no RTK human/human RON (autophosphorylation)	RON	T47D	no	RTK	human / human	RON (autophosphorylation)
S6K Karpas-299 no Ser/Thr Kinase human / human Ribosomal protein S6	S6K	Karpas-299	no	Ser/Thr Kinase	human / human	Ribosomal protein S6
SRC MEF-SRC yes Non-receptor TK human / mouse SRC (autophosphorylation)	SRC	MEF-SRC	yes	Non-receptor TK	human / mouse	SRC (autophosphorylation)
TIE2 CHO-TIE2 yes RTK human/hamster TIE2 (autophosphorylation)	TIE2	CHO-TIE2	yes	RTK	human / hamster	TIE2 (autophosphorylation)
VEGF-R2 HUE no RTK human / human VEGF-R2 (autophosphorylation)	VEGF-R2	HUE	no	RTK	human / human	VEGF-R2 (autophosphorylation)
VEGF-R3 yes RTK human / mouse VEGF-R3 (autophosphorylation)	VEGF-R3	MEF-VEGF-R3	yes	RTK	human / mouse	VEGF-R3 (autophosphorylation)

You ship your compounds - Reaction Biology performs the testing



- IC₅₀ values are determined by testing 8 compound concentrations in semi-logarithmic steps (each concentration in duplicates).
- · Quality assurance is provided by calculation of Z' factors for Low/High controls on each assay plate and by including a full IC₅₀ curve for a reference inhibitor to monitor adequate dose/response relation in your assay run.