

Reaction Biology Corp. ("RBC") was founded to pursue new economies in HTS and bio-chemical assays. RBC offers outsourced screening, profiling, and assay development, at lower cost than traditional outsourcing labs. RBC also performs NIH-funded research in technology development and early stage drug discovery. Screening partnerships with industry partners are also part of the RBC portfolio.

RBC specializes in developing new nanoliter scale assaying methods. By carefully scaling down enzyme and compound volume, RBC is able to offer outsourced biochemical assays at a much more economical price than other outsource or even in-house labs.

RBC's scientists have carefully studied the effects of miniaturization on standard assays, and have selected the latest technology to maintain high levels of repeatability and low error rates. RBC utilizes a proprietary suite of techniques in its low volume assays. While various low-volume technologies have been available for some time, their combination must be carefully researched in order to maximize efficiencies and minimize error rates. RBC has achieved what discovery researchers prize most: excellent data quality at low cost.

RBC Services

RBC offers a suite of services for early stage drug discovery that can allow researchers to expand their discovery horizons while controlling, even reducing, budgetary expenditures.

Kinase HotSpotSM

Miniaturized ³³P-Based Kinase Profiling and Screening Platform 350 Kinases Available, and Growing

Services Available

- Chemical Kinomic Approach for Drug Discovery (Focused Library Screening)
- Larger scale HTS
- Large scale single dose, duplicate profiling
- IC50 profiling — 5 or 10 dose with curve fitting
- ATP — competitive evaluation
- Compound binding reversibility test
- K_i determination
- Custom assay development
- Substrate determination
- Research collaboration

The HotSpotSM Advantage

GOLD STANDARD

³³P-based functional assay avoids the false positives and negatives generated by other assay formats.

HIGH QUALITY DATA

Z' > 0.7

HIGH REPRODUCIBILITY

R² > 0.95

LOW COST

HotSpotSM prices are lower than fluorescence based assay services.

FLEXIBLE CONDITIONS

IC50, qHTS, HTS, variable ATP concentration, customer-tailored conditions.

NO SPECIAL SUBSTRATE LABELING

Using both protein and peptide as substrates. No assay interfering labeling.

NO COMPOUND INTERMEDIATE DILUTIONS

Avoid compounds crashing out of solution.

LOW COMPOUND CONSUMPTION

Only nanoliters needed for assays.

FULLY VALIDATED

All assays come with DMSO as positive control, EDTA as negative control and IC50 standard kinase inhibitors.

Methyltransferase HotSpotSM

Miniaturized ³H-Based Histone and DNA Methyltransferase Profiling and Screening Platform

Services Available

- Larger scale HTS
- Large scale single dose, duplicate profiling
- IC50 profiling — 5 or 10 dose with curve fitting
- Custom assay development
- Substrate determination
- Research collaboration

Targets Available

Histone Lysine Methyltransferase

- DOT1
- EZH2
- G9a
- SET7
- SUV39H1
- SUV39H2

Histone Arginine Methyltransferase

- PRMT1
- PRMT3
- PRMT4
- PRMT5

DNA Methyltransferase

- DnMT1
- DnMT3a
- DNMT3b

The HotSpotSM Advantage

GOLD STANDARD WITH HIGH QUALITY DATA AND HIGH REPRODUCIBILITY

Exclusive ³H-AdoMet (SAM) based functional assay avoids the false positives and negatives generated by other assay formats.

FLEXIBLE CONDITIONS

IC50, qHTS, HTS, variable SAM concentration, customer-tailored conditions.

NO SPECIAL SUBSTRATE LABELING

Can use nucleosome, histone protein and peptide as substrates for HMTs. Use Plasmid or DNA fragment as DNMT substrate. No assay interfering labeling.

NO COMPOUND INTERMEDIATE DILUTIONS

Avoid compounds crashing out of solution.

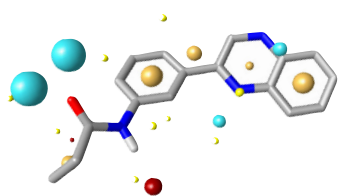
LOW COMPOUND CONSUMPTION

Only nanoliters needed for assays.

FULLY VALIDATED

All assays come with DMSO as positive control, NO-Enzyme as negative control and IC50 standard inhibitors.

HDAC SpectrumSM



Services Available

- A full spectrum of HDAC and SIRT assays
- Available in HTS and IC50 format
- Curve fitting included
- K_i determination available
- Custom assay development
- HDAC IIa specific substrate available

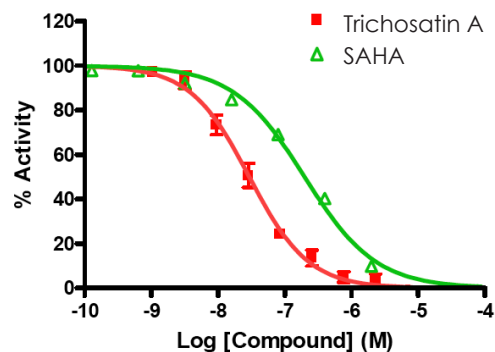
HDACs Available

- HDAC1
- HDAC2
- HDAC3
- HDAC4
- HDAC5
- HDAC6
- HDAC7
- HDAC8
- HDAC9
- HDAC10
- HDAC11
- Nuclear Extract
- SIRT1
- SIRT2
- SIRT3

HATs (Histone Acetylase)

- p300
- CBP
- hGCN5
- pCAF

Reference Compound IC50 for HDAC10

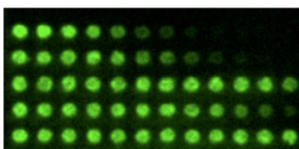


HDAC & SIRT
LICENCED FROM

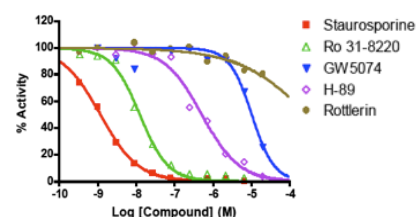
Other Available RBC Services Include:

- Compound Library Rental and Screening
 - 30,000 diverse collection
 - Non-public compounds
 - Rule of 5
 - MedChem filters
 - Data exclusivity
- Custom Assay Development
 - New targets
 - Difficult assays
 - Special substrates
 - Optimize your costs
- P450 Screening
- Phosphatase HTS & Profiling
- Biomarker Discovery

HotSpotSM Image and Resulting Data



Reference Compound IC50 for Akt3



REACTION
BIOLOGY CORP.

For more information
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