

In Vitro Safety

InVEST™ Panel

Cardiac Safety

Electrophysiology

Predicting potential safety liabilities early in the drug discovery process is integral for lead compound selection. *In vitro* safety screening enables selectivity-focused structure-activity relationship studies to mitigate off-target effects while retaining or increasing the compound's potency at the primary target.

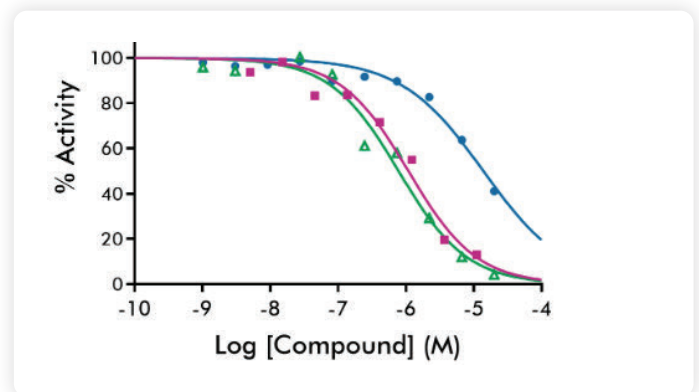
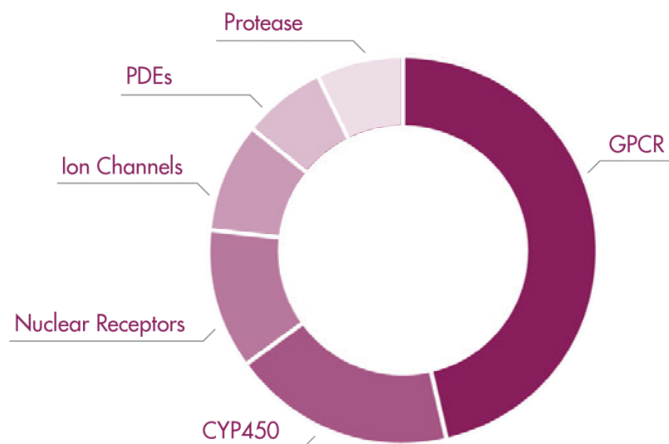
Inhibition of off-targets is often associated with adverse drug reactions in animal models and clinical studies. Reaction Biology offers services to screen for off-target effects of new drug candidates for early safety pharmacology assessment. Our *in vitro* safety pharmacology profiling determines the interaction between compounds and a broad range of targets that may cause adverse drug reactions in humans. These targets include receptors, transporters, enzymes, and ion channels. Reaction Biology's screening services enable developers to get an early read on potential drug safety issues.



IonFlux Mercury 16 Automated Patch.
Image courtesy of Fluxion Bioscience

InVEST™ Panel

This convenient service screens your compounds against over 50 targets known to be involved in human toxicity to aid with compound selection and early safety assessments. Available assay formats include enzymatic, biochemical binding, and radioligand binding assays.



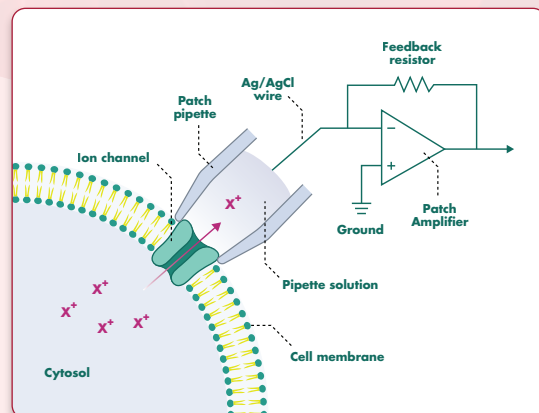
IBMX (blue, IC₅₀= 14μM. Slope= -0.72) methoxyquinazoline (green, 782 nM, -0.86) and Rolipram (red, 1.1 μM, -0.86) tested against activity of cAMP-specific cyclic phosphodiesterase 4A (PDE4A).

Add **your** compounds to our monthly schedule to address your *in vitro* safety screening needs!

Cardiac Safety

Screening for drug interactions with selected cardiac ion channels are **strongly recommended** by the FDA prior to lead compound entry into *in vivo* non-clinical and clinical trials. Reaction Biology offers screening for hERG and Na_v1.5 based on FDA protocols using electrophysiology in both manual and automated patch formats. In collaboration with our strategic partner, PharmaCore Labs, we offer a full package of *in vitro* and *ex vivo* cardiac safety assays, including cardiomyocytes, Purkinje fiber, and Langendorff heart preparations.

Talk to your Business Development partner today for more information on our Cardiac Safety offerings at Reaction Biology!

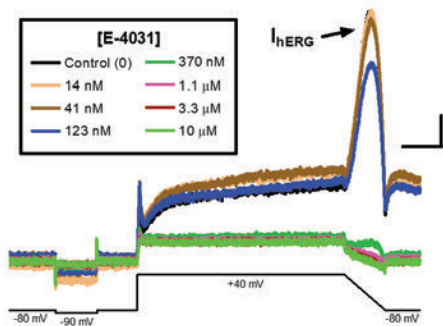


Schematic of manual patch clamp technique

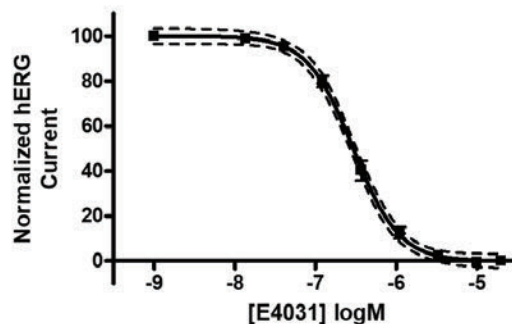
Electrophysiology

In addition to our Cardiac Safety electrophysiology offerings, we also offer customized ion channel projects based on your needs.

Reach out to your Business Development partner at Reaction Biology to arrange a free consultation today!



Example recording of hERG current (I_{hERG}) from CHO hERG-Duo cells (B'Sys) using manual patch.



Concentration-dependent effect of E-4031 on hERG current recorded using manual patch (n=23, 6 independent preparations): IC50=294 nM, Hill Slope=-1.53).

ALL your *in vitro* Safety and Electrophysiology needs in one place!

- ✦ 50+ targets in InVEST™ Panel
- ✦ FDA-recommended hERG, Na_v1.5 screening available in manual and automated patch
- ✦ Customized ion channel projects

Reaction Biology Corp.

- 1 Great Valley Parkway, Suite 2 Malvern, 19355, PA, USA
- sales@reactionbiology.com
- +1.610.722.0247
- www.reactionbiology.com/services/adme-safety/in-vitro-safety-screening

REACTION
BIOLOGY