



DISCOVERY

Ion Channel Selectivity Profiling Assays

Controlling many critical physiological functions, ion channels are an increasingly important drug target. Charles River scientists have developed an industry-leading portfolio of pharmacologically-validated ion channel cell lines to support cell-based drug discovery research programs. Identification of a compound's target specificity and potential for off-target effects is a critical step in the drug discovery process, and often includes assessments against specific target class families, critical safety targets or assessments by therapeutic area.

Charles River offers the largest collection of validated, functional ion channel panel assays for screening and profiling. Our ion channel portfolio includes over 120 assays, which have been organized into Channel Panels™ that address a number of key therapeutic and research areas, based on current scientific findings. We can provide functional, manual and automated ion channel screening by therapeutic area for profiling and risk assessment.

Available Channel Panels™:

- Cancer
- Cardiac
- Cardiovascular
- Genitourinary
- Neurodegeneration/Stroke
- Metabolic
- Pain & Inflammation
- Psychiatric disorder
- Pulmonary/Respiratory
- Seizure/Convulsion

EVERY STEP OF THE WAY

Improved Early Screening

The development of automated patch clamp and fluorescent assay platforms for ion channel research has made it cost-effective to screen and profile leads and to assess potential liabilities earlier in the drug discovery and development process. Our ion channel cell lines and assays have been pharmacologically validated to aid our clients in their mission to discover and develop new medicines. Our early functional screens for profiling drug candidates or ranking within profiles during the drug discovery process provide quick and accurate results. In addition to helping clients select from our available Channel Panels™, our scientists can also guide the choice of an appropriate platform, or custom design a panel to meet the specific needs of their program.

Ion Channel Cell Lines

To support in-house drug development efforts, we offer ion channel cell lines for purchase. Our cell lines have been validated for structure, function and pharmacology. Performance is characterized on conventional manual patch clamp or one or more automated platforms. Stable, replicating cell lines are available for many of the ion channels in our portfolio. We also offer EZCells™, division-arrested or transient transfected cells that are ideal for rapid and cost-effective screening. We provide flexible licensing terms, detailed cell culture and assay protocols and expert technical support, all which support the rapid development of robust assays.

Ion Channel Expertise

Charles River scientists have pioneered ion channel research for nearly 20 years, developing the most comprehensive portfolio of ion channel assays and cell lines available. This industry-leading expertise, combined with our wide array of technologies for screening, profiling and mechanism of action studies, makes us unmatched in our ability to support our partners' quests for the discovery of novel therapeutics.