

Accelerating drug discovery with high-quality small molecules

From hit identification to lead optimization - comprehensive solutions for every stage

Introduction to small molecules in drug discovery

Overcome your drug discovery challenges with Thermo Fisher Scientific's comprehensive portfolio for small molecule drug discovery. Our range of bioactive molecules can help you select the right assay, then our highly diverse screening libraries provide a higher chance of hit identification. After which our expansive collection of building blocks and reagents enable you to optimize your hits through Structure Activity Relationship (SAR) and finally scale your lead candidates through our custom and bulk solutions. Working with a single partner simplifies your discovery process, enhancing efficiency and reproducibility.



Bioactives from target validation to lead candidates

Our compound collections – including bioactive molecules, antibiotics and signal transduction reagents – are widely used across multiple phases of development.

Whether you're mapping a signaling cascade, validating a novel drug target, or refining a lead compound, our small molecule tools are designed to provide high-impact data and accelerate decision making across the full continuum of discovery and development.

 Unlike traditional hit-like collections these compounds are selected for their known or predicted biological activity and ability to modulate specific cellular targets or signaling pathways.

Screening for hit identification

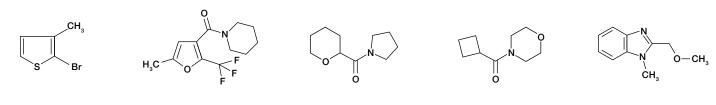
Our MaybridgeTM screening compounds and libraries have been at the forefront of innovative screening compound design for over 60 years, supporting the needs of drug discovery scientists in their pursuit of novel molecules of pharmaceutical interest. Our aim is to provide high-quality, hit-like, lead-like, and drug-like compounds that generate valuable data from screening programs.

 A smaller but highly diverse library will provide a greater "Hit" probability than much larger but less diverse libraries





Examples of fragments



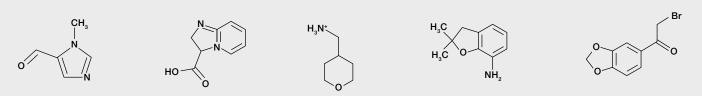
Examples of hits from high-throughput screening compounds

Building blocks for hit to lead optimization

The core of the Maybridge™ building block collection, these pharmacophorically rich intermediates are specifically designed for medicinal chemistry, allowing logical SAR development and hit-to-lead optimization. Many will be of particular interest as "privileged structures," while others bearing solubilizing moieties add to the pharmacokinetic profile of drug molecules.

• Facilitates the full breadth of chemical synthesis techniques and enables systematic exploration of structural diversity space

Examples of building blocks





Chemicals probes to understand the MOA

Our range of chemical probes are selective small-molecule modulators of a proteins function, designed to allow researchers the mechanistic and phenotypic questions about their molecular target in cell-based or animal research studies. These compounds help reduce the technical and biological risks of pursuing a pathway or target before incurring the time and expense of drug development and clinical trials.

• Biological properties include a known Mode of Action (MoA), high in vitro potency, high selectivity, and demonstrated on-target effects in cells.

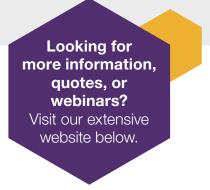
Examples of chemical probes

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