MilliporeSigma

Find your Lead

The life science business of Merck KGaA, Darmstadt, Germany operates as MilliporeSigma in the U.S. and Canada.

Sigma-Aldrich®
Lab & Production Materials

Leverage DNA-encoded library technology for drug discovery

As a high-throughput screening (HTS) researcher, you're familiar with the time-consuming process of assembly, curation, and often automated screening of hundreds of thousands of discrete compounds. That's followed by validation and sourcing usable quantities of any hits.

Accelerate your drug discovery with the DNA-encoded library (DEL) technology, an alternative approach to high-throughput screening (HTS) compound libraries for effective hit and lead discovery. The fragment DEL from our partner DyNAbind provides an entire screening library in a single tube, making your drug discovery process faster, more effective, and less expensive.

Each compound in a DEL is tagged with a unique barcode, allowing the entire library to be screened at once. Hits are isolated and cleaved from their barcodes, which are then easily amplified and sequenced to identify hits.

The DyNAbind Off-the-Shelf DEL

We've lowered the barriers to DyNAbind DEL technology. You now have access in your academic or drug discovery lab without building in-house capabilities or employing an external service. Just screen the kit, sequence, and check your hits. DELs come ready to use off-the-shelf as a lab consumable. They screen targets a fraction of the typical startup cost or lead time.

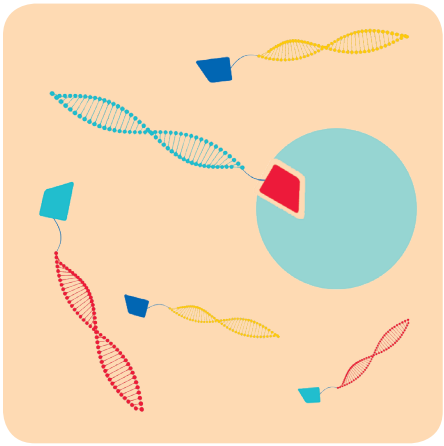
DyNAbind's proprietary dynamic library technology finds hits more effectively as fragments and fragment pairs, interrogating over 370,000 pairs against a target.

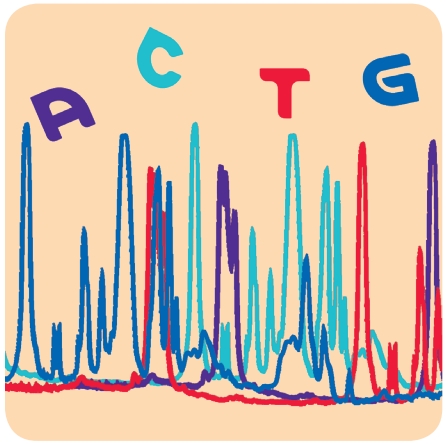
Features and Benefits

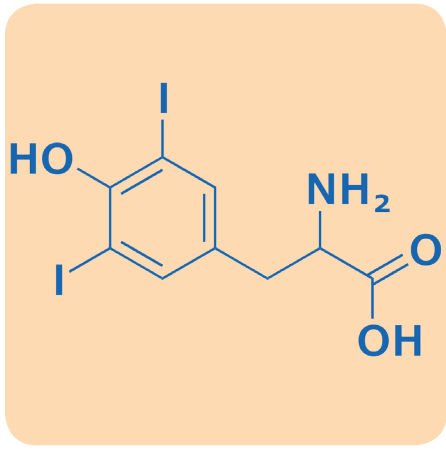
- Off-the-shelf, affordable access to DEL technology
- Dynamic fragment library provides a revolutionary approach to screening with DELs
- High level quality-control of every fragment component maximizes data reliability and validation of good hits
- Rule-of-Three used in library design ensures compounds are in favorable fragment space with good ligand efficiency and plenty of room for optimization[1]
- Ability to perform and validate initial DEL screening internally before engaging service provider
- A library with maximized diversity, ready to deploy against nearly any druggable target

How DyNAbind DEL Technology Works

While a detailed protocol accessible to most drug discovery labs is provided with each library, the general steps are outlined below.







Screen

- Immobilize your protein on solid support beads and screen the library to select compounds that bind.

Sequence

- Ligate dimers.
- Use PCR to amplify compound-specific tags, add experiment-tracking tags, and add sequencing tags.
- Run Next-Gen Sequencing.

Identify

- Add your sequencing data to a dedicated analysis portal at SigmaAldrich.com/DELanalysis to identify hits.

Product Description	Product Number
DyNAbind™ DNA-Encoded Fragment Library	DYNA001-1EA

We're dedicated to supporting all your explorations. To learn more about the DyNAbind off-the-shelf DNA-encoded library visit SigmaAldrich.com/DEL

1. Congreve, M.; Carr, R.; Murray, C.; Jhoti, H. *Drug Discovery Today* **2003**, *8*, 876

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