

# DNA encoded library oligonucleotides

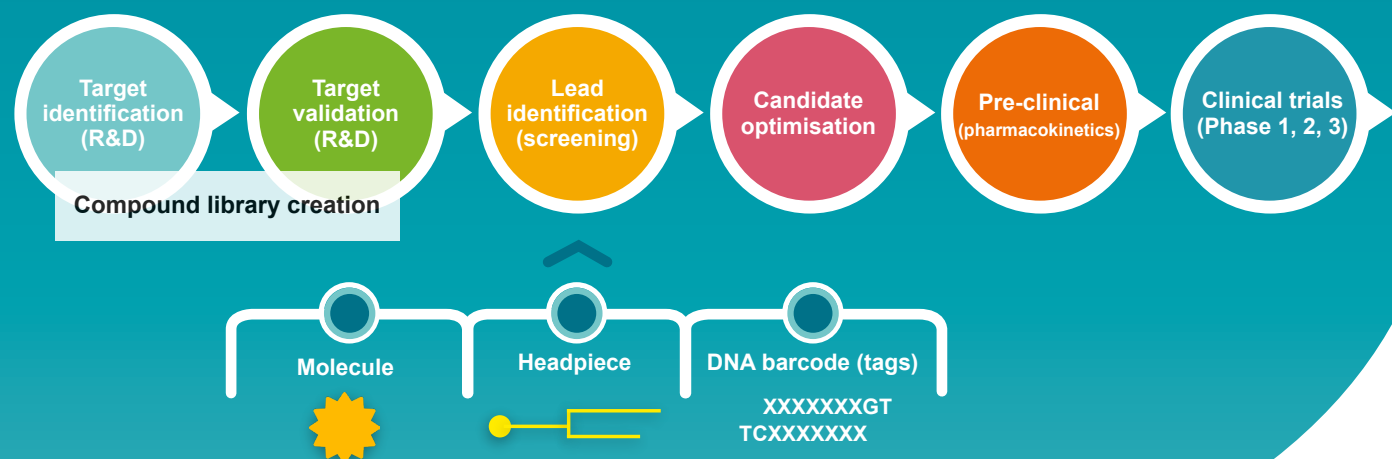


**Accelerating lead identification with  
high quality DEL components**

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Not for use in diagnostic procedures.

Integrated tools. Accelerated science.

# DEL components for drug discovery



## Accelerating drug discovery with high-quality oligos

DNA encoded libraries (DEL) are a rapidly growing drug discovery platform.\* Synthesising a DNA encoded library requires the assembly of unique small molecules linked to unique identifying DNA sequences that serve as barcodes. Subsequently, hits (candidate compounds) are identified by sequencing the DNA barcode. The use of high quality oligos and enzymes are essential to the success of DEL synthesis. LGC, Biosearch Technologies™ is a trusted manufacturer of high quality oligos for DEL. We offer standard and custom DEL oligos and enzymes and are a trusted partner with many organisations that are synthesising DEL by split and pool, encoded self-assembly, DNA templated chemistry, and other synthesis techniques.

## High quality oligos and enzymes for high quality libraries

At Biosearch Technologies, we know quality matters. By understanding your needs and working collaboratively, our aim is to advance DEL technology together.

### Better results

- **Confidence that DEL synthesis will work the first time**
  - Over 35 years of experience in nucleic acid synthesis
  - Each oligo is QC'd by LC/MS to verify quality and identity
- **Reproducibility**
  - Large scale synthesis capacity allows for single batch manufacturing, removing the need to pool multiple batches
  - DNA sequences are electronically transmitted to proprietary in-house engineered synthesisers for improved consistency
  - Manufactured in an ISO 9001-certified facility
  - Automated liquid handling

### Flexibility

- **Personalised specialisations for improved efficiency**
  - Multiple standard and custom synthesis scales
  - Multiple delivery formats
  - Custom modifications
  - Custom conjugation chemistries

\*A Handbook for DNA-Encoded Chemistry: Theory and Applications for Exploring Chemical Space and Drug Discovery. Ed.: Goodnow RA, Jr. (2014) John Wiley & Sons, Inc.

## DEL oligo specifications

### Standard headpiece

<b>Headpiece (14 bp double-stranded DNA headpiece, amine-C7-modified)</b>
<b>AOP headpiece (linker-extended headpiece, PEG-amine-modified)</b>
Primer-extended AOP headpiece
Synthesis scales from 1 µmol to 1 mmol (larger scales available as custom)
Dual HPLC followed by desalting
Lyophilised
QC by LC/MS to verify quality and identity

### Standard tags (codes)

5' phosphate labeled
Desalted
250-1000 nmol delivered (larger scale available)
Duplex delivered in 2D barcoded tubes as 1 mM solution in water
QC by LC/MS to verify quality and identity

### Standard primers

Primer duplex
5' phosphate labeled
Desalted
Lyophilised or normalised
QC by LC/MS to verify quality and identity

### Tailpieces

Closing primer duplex
5' Phosphate labeled
Degenerate region varies in length and position within sequence
5-1,000 nmol delivered (larger scale available)
Duplex delivered in 2D barcoded tubes as 1 mM solution in water or lyophilised in tubes or 96-well plates
QC by LC/MS to verify quality and identity

### Customisations

Larger synthesis scales
Delivery formats
Purification
Sequence
Length
Modifications
Linkers

### Companion product

<b>NxGen™ T4 DNA Ligase</b>
Available in 2 U/uL, 10 U/uL and high concentration 30 U/uL
Manufactured in ISO13485-compliant facility
Bulk and custom dispensing available.

For more information please check our webpage at:

<https://bit.ly/3KSzHGX> or contact our

Technical Support team at:

[techsupport@lgcgroup.com](mailto:techsupport@lgcgroup.com)

**100% QC – each oligo is QC'd by LC/MS to verify quality and identity**

Each order is supplied with a certificate of analysis and data file.





# A trusted partner in accelerating DEL advancement for over 10 years

“ I have been working in the DNA encoded library field for many years and have tried multiple suppliers for our synthetic DNA in the past. By far, nobody has surpassed the quality and commitment from Biosearch, allowing us to synthesise our libraries with the highest fidelity. ”

**Paolo Centrella**

Associate Director, Discovery Chemistry, X-Chem Inc.

“ LGC/Biosearch is our go to provider for DNA based bar codes for DNA Encoded Library (DEL) synthesis. They set the standard in quality, quantity, turn-around time, customer service and commitment. This allows us to generate the highest quality libraries to drive our ligand identifications efforts. ”

**David R. Langley**

Senior Director, Platform Chemistry, Arvinas, Inc.

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GENOMIC ANALYSIS BY LGC