

Exploring versatility of Clickmers®: Adaptable binders for small molecules

Small molecule Clickmers® are modified DNA aptamers that are capable of binding small molecules for a variety of applications such as toxin monitoring or detection of antibiotics.

Diverging from conventional antibody-based methods, Clickmers can target entities evading immunogenic recognition, broadening molecular detection possibilities.

Through rapid development facilitated by Systematic Evolution of Ligands by Exponential Enrichment (SELEX), small molecule Clickmers emerge as promising candidates for addressing pressing diagnostic demands.

What are Clickmers?

Clickmers are chemically modified aptamers. Based on their sequence and modifications they form three-dimensional structures and thereby adaptively bind to their target molecules with high affinity and specificity. The introduction of side chains/modifications through the Nobel Prize winning 'Click' chemistry provides increased chemical variability and flexibility compared to standard aptamers, which increases the probability of developing an excellent target binder.

Advantages of small molecule Clickmers

- **Rapid discovery process** – can be selected within a few weeks
- **High selectivity** – can differentiate between highly similar targets
- **Target diversity** – can be developed against non-immunogenic small molecules
- **Flexible assay read-out** – no labeling of small molecules required
- **High batch to batch consistency** – which is due to chemical synthesis
- **Excellent stability** – show thermostability and are therefore independent from cold chain

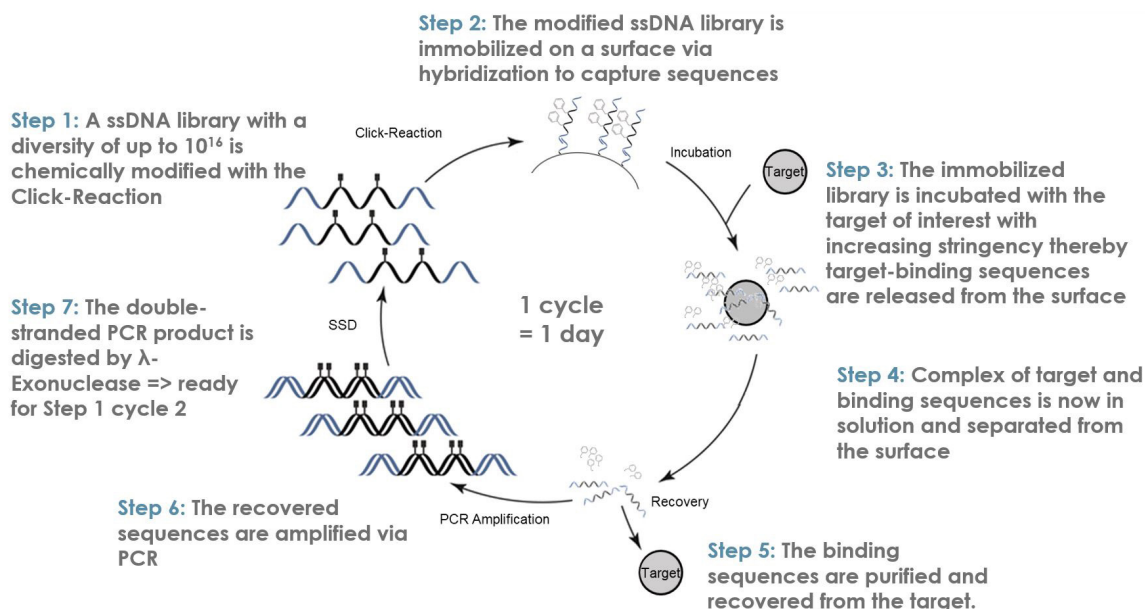
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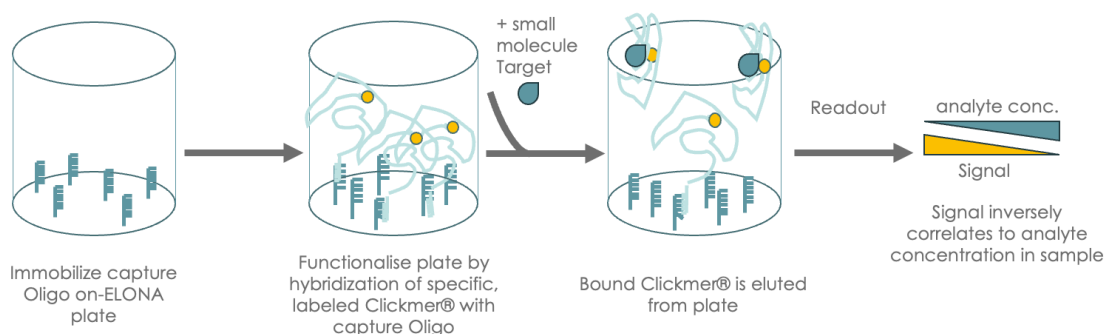


Small molecule capture Click-SELEX

Small molecule Clickmers are selected via a specific SELEX set up, the capture-Click-SELEX. Here, the library is immobilised via a docking sequence and detached by adding the target allowing for a binding of potential Clickmers and target in solution.



The use of Clickmers for small molecule detection provides a distinct advantage: no sandwiching or labeling of the small molecule is necessary. This assay can conveniently utilise standard immunoassay equipment.



Benefits of Small molecule capture Click-SELEX

- Adaptability** – The SELEX process is highly adaptable, thereby generating Clickmers that excel under the conditions chosen for the final application
- Specificity** – The SELEX process allows for deliberately increasing the selection pressure e.g. by use of competitors and negative selection to generate Clickmers that have a high specificity and affinity to their target

Customise towards your needs: Small molecule Clickmers can be selected specifically for your needs and intended purpose. For further inquiries please don't hesitate to contact us.

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