Speeding up T-Cell Receptor Discovery for Adoptive Cell Therapy

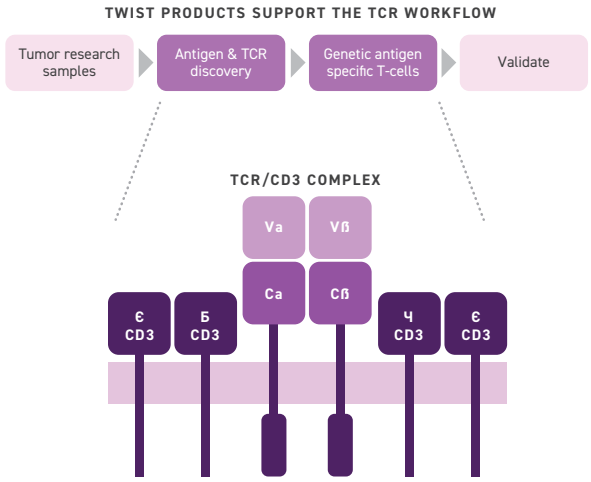
Adoptive cell therapy arms the patient's immune system with the tools to fight some of the most challenging and pervasive diseases. Engineered T-cells presenting custom T-Cell Receptors (TCRs) are a promising therapeutic for treating solid tumors. A key challenge in the development of TCR therapeutics is the identification of appropriate TCR binding domains that target disease specific tumor antigens. Twist Bioscience is helping overcome this challenge with combinatorial libraries of alpha and beta domains, allowing researchers to rapidly screen for functional and efficacious TCRs.

The TCR Discovery Challenge

TCRs precisely bind their cognate antigen via the highly variable alpha and beta chains. Functional alpha and beta pairings must be discovered against an antigen of interest.

When screening for TCRs that specifically bind to an antigen without self-targeting, potential alpha and beta pairings must be tested.

Twist Bioscience offers cloned genes, oligo pools and TCR screening libraries for the rapid identification of functional alpha and beta chains for effective antigen targeting.



Twist's solutions support the discovery and optimization of new TCR candidates for research into therapeutic development

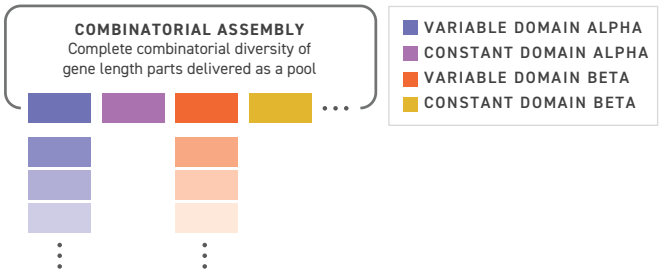
TCR Discovery Libraries

POWERED BY COMBINATORIAL ASSEMBLY

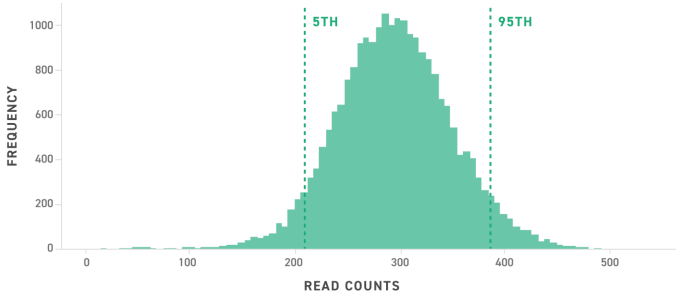
EARLY ACCESS

As an early access offering, Twist will construct custom combinatorial libraries of potential TCR pairs based on the observed variable domains in your dataset.

- **Screen a realistic dataset.** Every variable domain is precisely synthesized as a Twist Gene Fragment
- **Do less bench work.** All combinatorial variants arrive cloned into a scaffold of your choice
- **Identify hits with less screening.** Twist's library cloning technology ensures the delivery of a highly uniform library, saving you money on screening



Twist Combinatorial Assembly allows you to test the full combinatorial diversity of candidate variable alpha and beta domains.



Twist's DNA synthesis platform ensures the generation of highly uniform libraries.

All products highlighted are for research use only, and are not intended for use in clinical products or any diagnostic procedures.

Screen TCRs Rapidly

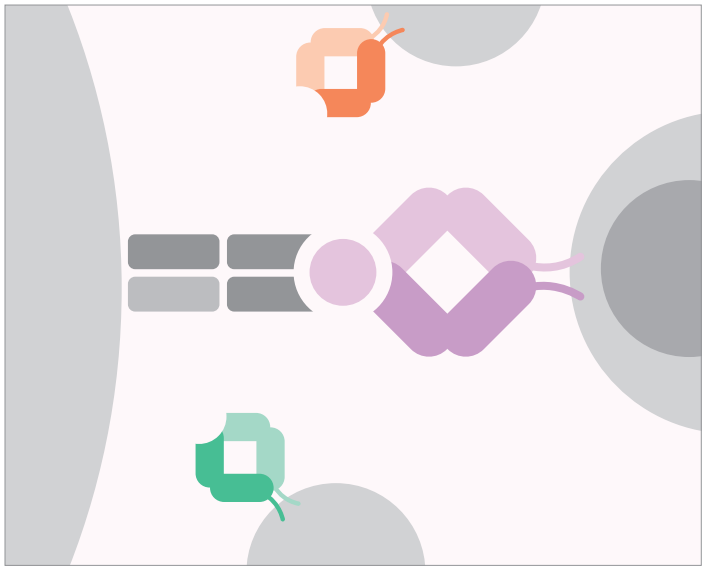
WITH TWIST CLONED GENES AND OLIGO POOLS

Screening TCRs requires several synthetic parts:

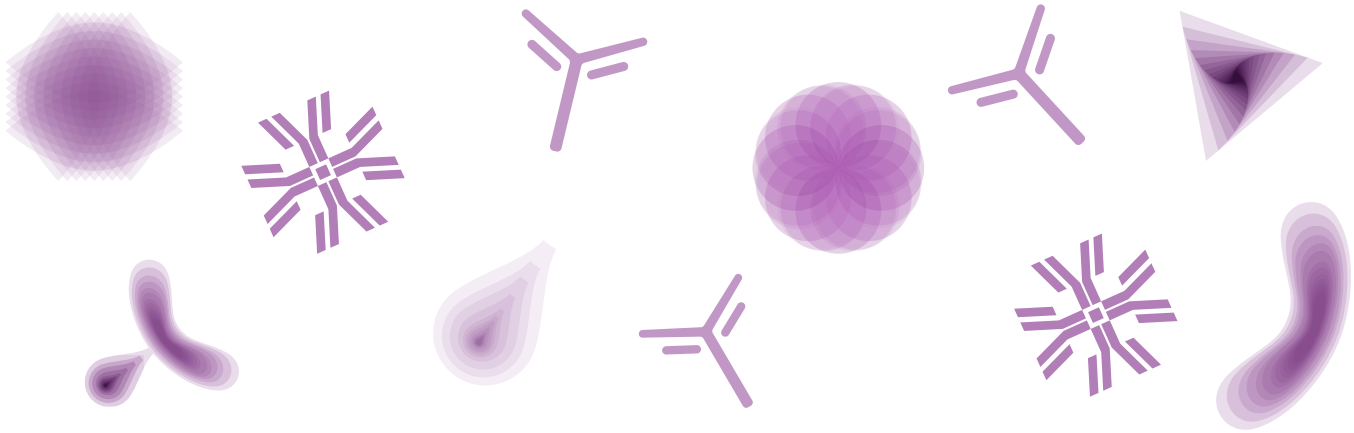
- Synthetic antigens to screen against
- Synthetic TCR candidates to identify beneficial binders
- Synthetic peptide libraries to validate targets and ensure the specificity of TCR hits

Generate TCR candidates and antigens on demand with Twist Gene Synthesis. Both antigens and candidate TCRs can be made in a vector of your choice and delivered quickly, ready to screen.

Encode peptide libraries in Twist Oligo Pools and screen your TCRs against novel targets for new therapeutic modalities, or ensure TCRs do not target self-peptides.



Find the right TCR candidates for further therapeutic research.



WRITING THE FUTURE OF BIOLOGICS

YOUR PARTNER FOR BIOLOGICS DISCOVERY AND EARLY DEVELOPMENT

DECREASE RISK | LOWER FAILURE RATE | INCREASE SPEED TO MARKET

Twist Biopharma (a division of Twist Bioscience) offers rapid and efficient biologics discovery services, with custom and pre-built phage display libraries built on our unique DNA writing technology.

PARTNER WITH US

Please reach out to **biopharma@twistbioscience.com** to discuss your project