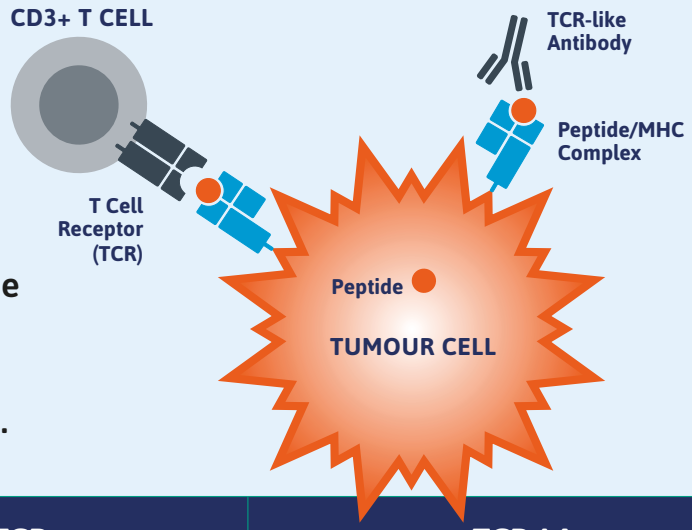
IMMUNITRACK

New avenues for treating cancer: TCR-LA targeting intracellular tumor antigens

TCR-LA (TCR-like antibodies) combine TCR-recognition mode with therapeutic versatility and efficacy of conventional monoclonal antibodies (mAbs).



	TCR	TCR-LA
Specificity	Tend to be cross-reactive	Can be engineered to be very specific
Affinity	Micromolar or modified to nanomolar	Nanomolar to picomolar
Plasma kinetics	Soluble forms are unstable. ImmTac half-life is 6-8h	Half-life from hours to weeks based on structure
Therapeutic format	Bispecific forms or transduced into T cells	Native IgG, Bispecific forms, ADC, CAR, radioconjugate
Effector function	Directs or re-directs T cells to kill	Redirects T cells to kill, recruits NK cells or Mac to killl. Vehicle for drug or isotope delivery

High throughput platform for epitope discovery – NeoScreen

Immunitrack has a high throughput platform for epitope discovery by conducting affinity and stability assessments of MHC/epitope complexes (NeoScreen platform). With this technology we have identified immunogenic targets of cancer testis antigens and of cancer driver mutations. We have a large library of MHC Class I and Class II molecules, which allows us to discover antigens that could target the whole population.

Production of highly pure peptide/MHC complexes

Immunitrack can produce best-in-class highly pure peptide/MHC complexes, as a starting material to discover TCR-LAS using any preferred antibody library. We also produce control peptide-MHC complexes for counter screening during the antibody selection process.

Immunitrack has validated the application of its MHC/epitope complexes for raising TCR-LA in multiple systems including, phage displays, humanized mouse, rabbit.

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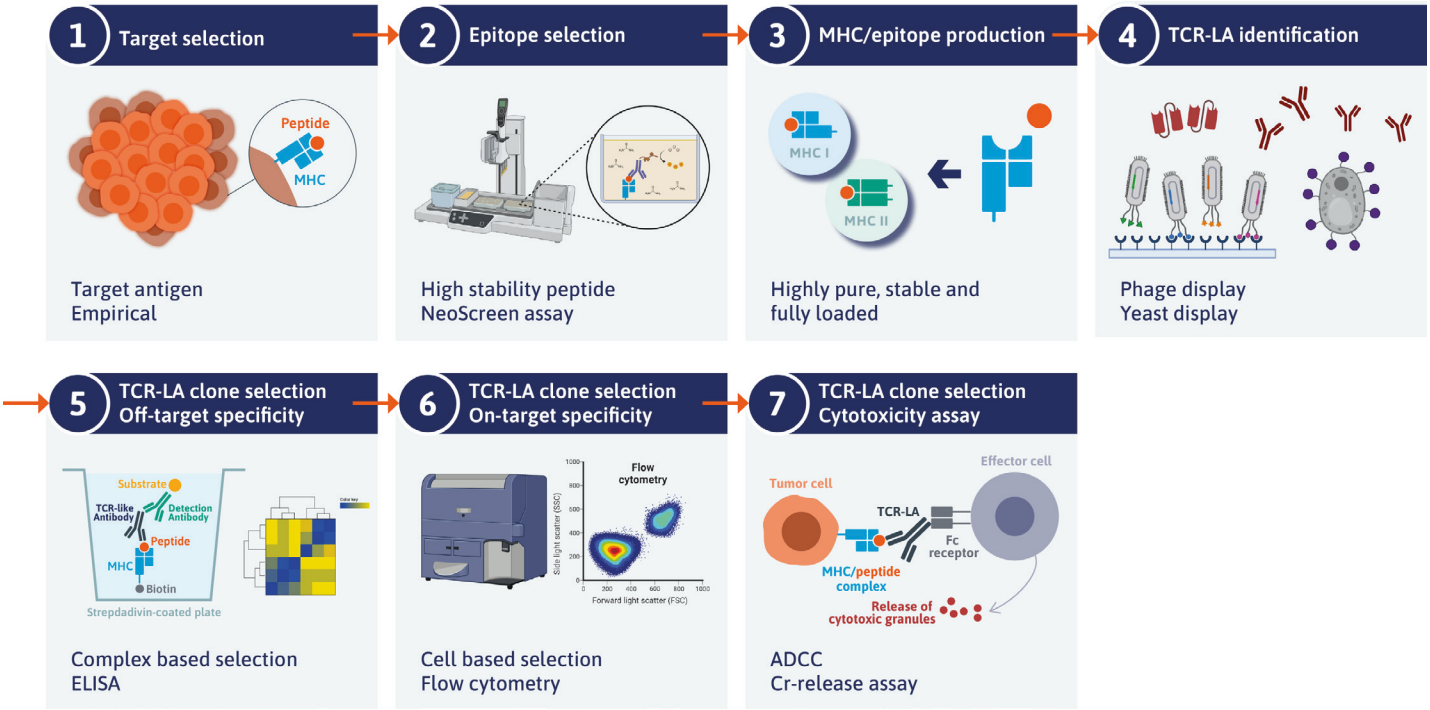
TCR-LA

First-in-class TCR-LA characterization platform (AbScreen)

Immunitrack has implemented and validated a first-in-class TCR-LA characterization platform (AbScreen). TCR therapies have raised serious concerns about off-target toxicities that attacked healthy tissues. This highlights the urgency of pre-clinical testing to assess which peptides can be recognised by a TCR or TCR-LA.

To avoid cross-reactivity we have established a series of off-target assays:

- Alanine Scans in peptide/MHC complexes and in model cell lines
- Screening on peptide libraries which are unrelated to target peptide, but are validated epitopes in the corresponding MHC
- Positional scanning libraries screens on peptide libraries derived from the target.



Read more about the NeoScreen platform on our webpage:

https://www.immunitrack.com/neoscreen-technology/

Are you developing new biologics such as antibodies, nanobodies or therapeutic enzymes?

Contact us and learn how we can help you in selecting drug candidates that are least immunogenic, deimmunise your drugs and provide safety data that can be used in your IND filling.

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