

LENS^{ai}™ BioIntelligence Suite Immunogenicity Screening

Boost your clinical strategy: *in silico* screening helps mitigate risks, enhance efficacy, and reduce time/costs

LENS^{ai} Integrated Intelligence Technology — an innovative platform leveraging advanced AI capabilities to deliver unparalleled protein analysis and lightning-fast immunogenicity screening. Powered by BioStrand's proprietary HYFT[®] technology, LENS^{ai} Immunogenicity calculation combines HLA II binding and human proteome presence for comprehensive risk assessment.



Avoid costly transgenics:

Advance highly diverse candidate pools while reducing costs



Satisfy requirements:

EMA and FDA recommends documented immunogenicity screening for increasing clinical success*



Versatile use:

Works with all antibody formats. Analyze large pools at an early stage (e.g. enrich repertoires) or refine later stage candidate selection



Optimize workflows:

Enhance decision-making in engineering, such as the humanization stage, to optimize high-throughput screening and mitigate risks in clinical development

High-throughput analysis

Built for high volume

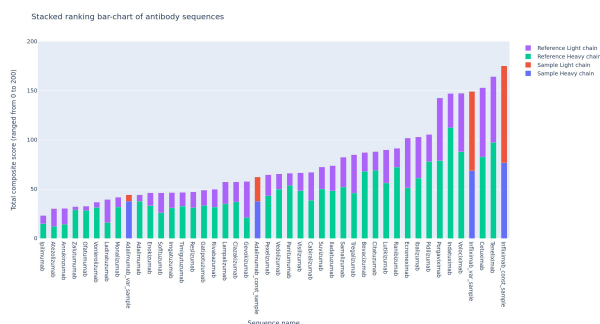
Virtually limitless quantity can be screened, compared and ranked

Flexible implementation

Ability to integrate in your own pipelines and workflows

Optimize derisking

Pairing with humanization: designed to derisk and advance the best candidate



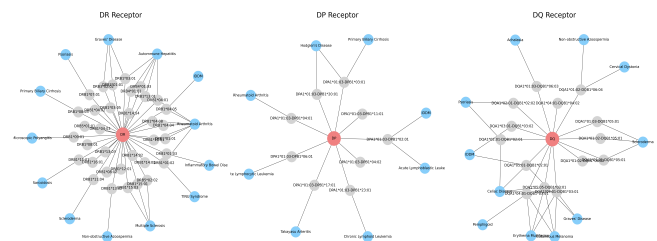
In-depth profiling

Built for insight

- Detailed linkage between antibody and target
- Geno- and phenotype binding distribution mapped to target indication profile

Connecting target, lead and clinical events

MHCII allele phenotypes and genotypes associated with clinical events



Service offered as yearly subscription or project-based.

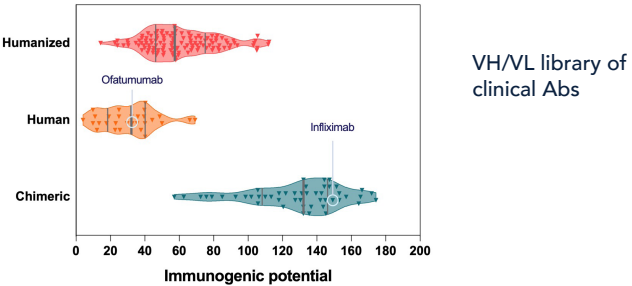
*https://www.ema.europa.eu/en/documents/scientific-guideline/guideline-immunogenicity-assessment-therapeutic-proteins-revision-1_en.pdf
<https://www.fda.gov/regulatory-information/search-fda-guidance-documents/immunogenicity-assessment-therapeutic-protein-products>

LENS^{ai} Immunogenicity Screening

Key features: designed for throughput, speed, scalability, and insights

Reference your antibodies against a database of all therapeutic antibodies

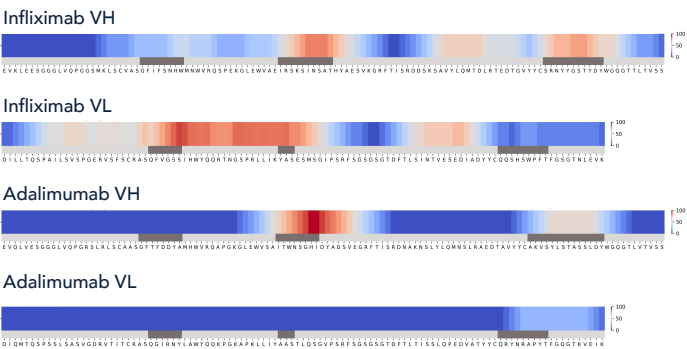
Data reference sources: Therapeutic structural Ab database VH/VL format (n≈2000), VHH library, bispecific library, and general proteins.
Right figure: Parsed based on nomenclature (n ≈ 260)



Delivering multi-level analyses and comprehensive reporting

Immunogenic zones per sequence

Normalized score showing immunogenicity hotspots by combining HYFT Universal Fingerprint proteome screening and HLA II binding scores.
Dark Blue = 0 = low immunogenic potential
Dark Red = 100 = highest immunogenic potential



Get insights in potential immunogenicity risks introduced by engineering

Example - Bispecific formulation: bsAb VL1-VH1-VH2-VL2

Connecting target-specific knowledge to lead specific MHCII binding and clinical events

