

# Ainnocence Unveils SentinusAI®: Revolutionizing Antibody Design, Conquering Undruggable Targets, Rescuing Failed Trials

*Transforming Cancer Immunotherapies  
with AI-Driven Discovery and  
Optimization*

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/EINPresswire.com/ -- [Ainnocence](https://www.ainnocence.com)

today announced the launch of [SentinusAI®](https://www.ainnocence.com), a groundbreaking AI platform for precision antibody design. This proprietary technology redefines antibody discovery by tackling undruggable targets, rescuing failed clinical trials, and extending patent life.

The SentinusAI® platform is an AI-powered protein design engine that enhances antibody affinity and addresses challenging targets, including membrane and secreted proteins. It combines advanced epitope mapping with de novo hit generation, affinity maturation, off-target screening, humanization, and developability optimization.

This comprehensive approach can virtually screen up to  $10^{10}$  antibody sequences within hours to days, accelerating the development of life-saving therapies for previously intractable targets. The platform is also able to deliver a shortlist of candidates with a high wet lab hit rate, accelerating the development of life-saving therapies.

SentinusAI's platform designs various antibody formats, including full-length IgG antibodies, antibody fragments (Fab, scFv, VHH), bispecific and multispecific formats, and constructs for antibody-drug conjugates and CAR-T applications.



**SentinusAI®**  
Protein Design Engine

 Ainnocence

-  **De Novo Protein Design**  
IgG, Fab, scFv, VHH, peptides etc.  
Bispecific and multi-specific formats  
Antibody-drug conjugate (ADC, PDC)
-  **Affinity Maturation**  
Therapeutic Antibody Affinity Maturation  
Fusion Protein Engineering
-  **Epitope Mapping**  
Binding specificity Optimization
-  **Therapeutic Protein Humanization**  
Immunogenicity Assessment  
Antibody Humanization
-  **Therapeutic Protein Off Target Prediction**  
Protein Off-target Toxicity Prediction
-  **Therapeutic Protein Developability**  
Stability Prediction of Sequence Optimization

**Application Scenarios** | Therapeutic Drug and Vaccine Design  
Diagnostic Antibody Design  
Industrial Enzyme Optimization

Revolutionizing drug discovery with our next-generation, self-evolving AI platform: SentinusAI®

It excels in designing bispecific antibodies targeting CD3, BCMA, and other cancer-related targets, as well as high-affinity antibodies for antibody-drug conjugates (e.g., Her2, CD22, CD30), addressing solid tumor penetration challenges and maximizing therapeutic index.

Key Advantages of the SentinusAI Platform:

1. Unmatched sequence space exploration

AI algorithms efficiently analyze billions of sequences, identifying high-affinity, humanized antibody candidates.

2. Rapid turnaround

Powered by AWS elastic cloud computing and Nvidia GPU, computational delivery occurs within one week, with antibody production and testing within a month.

3. Wide applicability

Suitable for numerous therapeutic targets, including:

Membrane proteins: CD19, CD20, PD-L1, CTLA-4, HER2, EGFR, CD22, CD33, CD30, CD56, CD123, CD133, CD45, CD47, CD95, VEGFR, FGFR, MET, ALK, HER2, HER3

Secreted targets: IL-2, IL-6, TNF- $\alpha$ , IFN- $\gamma$ , IL-17A, IL-10, IL-1 $\beta$ , TGF- $\beta$ , M-CSF, GM-CSF, VEGF, FGF, HGF, EGF, IGF, PDGF, RANTES, MCP-1, MIP-1 $\alpha$ , SDF-1

These targets are crucial for cancer immunotherapy, autoimmune diseases, and chronic inflammatory conditions.

4. Cost-effective

Significantly reduces R&D time and costs compared to conventional phage display, hybridoma, or B-cell sequencing methodologies.

5. Ethical and sustainable

Eliminates the need for animal screening in antibody generation and testing.

Beyond therapeutics, SentinusAI<sup>®</sup> applies to industrial enzymes, agriculture, diagnostics, and environmental solutions, revolutionizing protein-based innovation across industries.

This launch marks a significant milestone for Ainnocence and the pharmaceutical industry, promising to develop highly effective therapeutics and improve global health outcomes through artificial intelligence.

About Ainnocence:

Ainnocence is revolutionizing drug discovery with our next-generation, self-evolving AI platform.

We offer unparalleled speed and precision in virtual screening and pharmacological profile optimization for various therapeutic modalities.

To explore how our AI-driven innovation can transform your drug discovery process, visit [www.ainnocence.com](http://www.ainnocence.com) or follow us on [LinkedIn](#).

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