

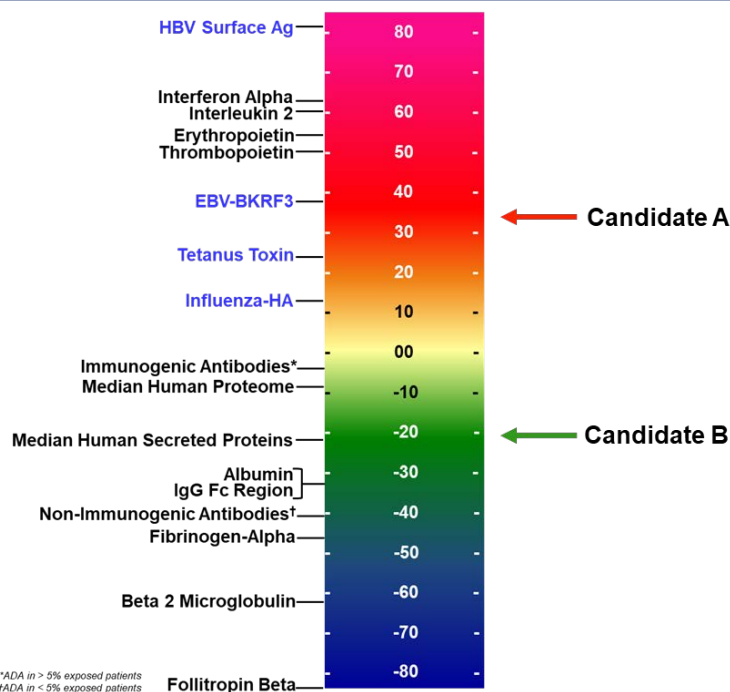
The **I**nteractive **S**creening and **P**rotein **R**eengineering **I**nterface (**ISPRI**) is a highly refined suite of in silico immunoinformatics tools designed for the seamless screening and optimization of biologic products. This secure interface is linked to EpiVax's proprietary toolkit via the internet and provides significant advantages over other available tools.

- **First:** The user-friendly ISPRI toolkit has been extensively validated internally, externally, retrospectively, and prospectively since 1998. The accuracy of EpiVax's flagship immunoinformatics algorithm, **EpiMatrix**, is thoroughly documented in peer-reviewed publications.
- **Second:** Several tools within EpiVax's ISPRI toolkit are simply not available through other providers, nor is the expert support that is provided by the EpiVax team.
- **Third:** EpiVax has exclusive knowledge of the impact of regulatory T cell epitopes, **Tregitopes**, on the immunogenicity of antibodies in clinical use. Tregitopes are an EpiVax discovery, and their consideration is critical for accurate predictions of clinical immunogenicity. Other available tools fail to account for Tregitopes and can yield misleading results.

Integration of this immunogenicity assessment technology into the product discovery and development process can significantly enhance the quality and value of your pipeline and lead to success in the clinic.

Researchers can use the ISPRI toolkit to:

- Screen the amino acid sequences of biologic product candidates for the presence of putative Class II HLA T cell epitopes using the **EpiMatrix** algorithm.
- Rate the overall immunogenic potential of each submitted sequence on a normalized **Protein Immunogenicity Scale**, and compare each protein to other known immunogenic and non-immunogenic proteins and antibodies.
- Identify regions, or "clusters", within biologic product candidates that contain many T cell epitopes, and may be targets for deimmunization, using **ClustiMer**.
- Rate the immunogenic potential of each T cell epitope cluster on a normalized **Cluster Immunogenicity Scale**, and compare each T cell epitope cluster to other well-known immunogenic and non-immunogenic peptides.
- Identify, within biologic product candidates, any previously validated **Tregitopes**, sub-regions that induce natural regulatory T cell responses and dampen the immunogenic potential of biologic product candidates.
- Screen each identified T cell epitope using **JanusMatrix** to assess conservation between the T cell epitope and proteins in the human proteome. High conservation increases the likelihood for T cell epitopes to be recognized as "self", thereby avoiding an immune response or actively eliciting a tolerogenic response. This tool ensures a more accurate assessment of the immunogenic potential of biologic product candidates.
- Interactively deimmunize T cell epitope clusters using **OptiMatrix** (a premium add-on tool), which enables real-time amino acid substitutions and an instant reassessment of immunogenicity.



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