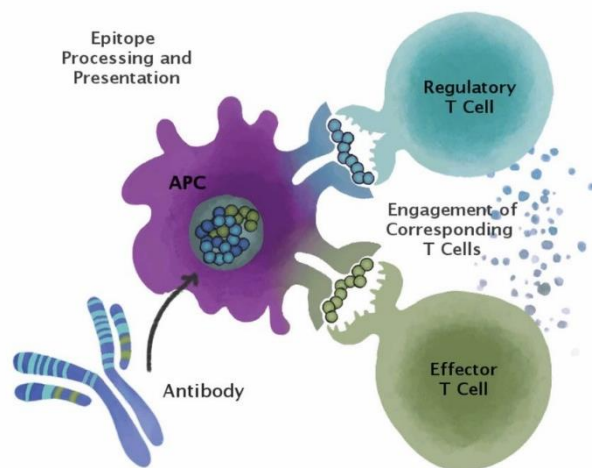
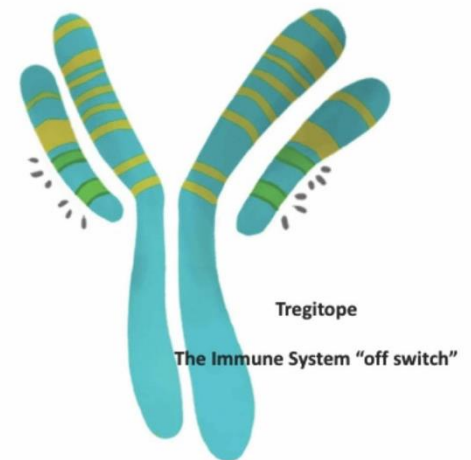


What is Tregitope?

Tregitopes are “natural” on switches for an important class of cells that are involved in tolerance: Regulatory T cells (Tregs).

Tregs regulate innate and adaptive immune responses and play a key role in inhibiting inflammatory responses in humans and animals. Therefore, development of new, non-toxic, safe and effective agents to promote Treg expansion may be very useful for treating autoimmune diseases that affect large population groups, including diseases such as alopecia, arthritis, allergy, and inflammatory bowel disease. Tregs are also critically important for induction of tolerance in transplantation.

EpiVax has developed a proprietary set of natural T regulatory epitopes (“Tregitopes”) that induce the expansion of antigen-specific adaptive regulatory T cells (aTregs) in animal models of autoimmune disease allergy and transplantation.



Tregitopes are derived from immunoglobulin (Ig) and other prevalent serum proteins and have the following characteristics: (a) they bind to multiple MHC class II molecules, (b) they suppress effector T-cell immune responses to co-delivered antigen in vitro and in vivo, and (c) they up-regulate Treg-associated cytokines and chemokines in vitro and in vivo. Tregs cells responding to Tregitopes secrete IL-10 and granzyme B and they have been shown to convert nearby effector T cells to FoxP3+ antigen-specific aTregs.

The immune modulatory action of Tregitopes has been demonstrated in a range of models by expert collaborators, in autoimmune disease, EAE, gene therapy, inflammatory bowel disease and allergy.

How is Tregitope applied to autoimmune diseases?

Tregitopes are generally used in combination with the target antigen in autoimmune disease models. For example, Tregitopes have been used with diabetes antigens to reduce blood sugar levels in diabetic mice

When will Tregitope be ready for the clinic?

Tregitope products for dermatology are being developed at Maruho. The development of these products is expected to take several years as the final formulation will need to be decided on.

Where will development of Tregitope programs take place?

The current collaboration between EpiVax and Maruho is already well established and will continue under the current license agreement. Once Tregitope therapies are developed for the dermatology indications they will be available worldwide.

Why should you be interested in Tregitope?

Currently, immune rejection is managed by the systemic administration of immunosuppressive drugs, although other treatments such as T cell response-modulating monoclonal antibodies, are being explored. None of the approaches has demonstrated significant long-term effectiveness to date, and some of the treatments may be associated with an increased risk of infection or cancer. Tregitopes represent a more natural way of inducing tolerance than taking immune suppressive drugs, and treatment might be initiated early, might be safer, and could have long lasting effects.