

IL-35 Protein

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About IL-35 Protein:

- It is a specific protein of **IL-12 α** and **IL-27 β** chains.
- It helps **protect against type 1** and **autoimmune diabetes**.
- It regulates macrophage activation, T-cell proteins, and regulatory B cells.
- It inhibited pancreatic beta cell-attacking immune cells. Additionally, IL-35 lowered particular immune cells that produce inflammatory chemicals, **reducing pancreatic cell infiltration**, a key contributor in type 1 diabetes and autoimmune diabetes mellitus.

What is autoimmune diabetes mellitus?

- Autoimmune diabetes mellitus or T1DM is an **organ-specific autoimmune disease**.
- It affects the **insulin-producing pancreatic beta cells**, after an inflammatory process leads to a chronic deficiency of insulin in genetically susceptible individuals.
- It ultimately results in lifelong dependence on exogenous insulin.

- It is a **complex multifactorial disease** in which both genetic susceptibility and **environmental factors promote** the autoimmune responses against beta cells.
 - Several environmental risk factors have been suggested as candidate triggers of islet autoimmunity, including certain viruses higher birthweight, infant weight gain, dysbiosis of the gut microbiota and various dietary factors (e.g., **vitamin D** deficiency, omega-3 fatty acid deficiency, high milk consumption)
 - There are **no preventive or immunosuppressive therapies** that can prevent damage or disease manifestations.
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Q1: What is Immune Imprinting?

Immune imprinting is a tendency of the body to repeat its immune response based on the first variant it encountered (through infection or vaccination) when it comes across a newer or slightly different variant of the same pathogen.

News: IL-35-Mediated Immunotherapy: A New Treatment for Type I and Autoimmune Diabetes Mellitus

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