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Auto Antigen in Type 1 Diabetes

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Abstract

Hybrid insulin is present in Human islets and T cells react to them. These are found in the residual islets of organ donors with type 1 diabetes. Investigation was carried out HIP react to T cells are indicated of ongoing.

Autoimmune disease. Usage of interferon gamma was used.

Keywords

Hybrid insulin; type1 diabetes; autoimmune disease; T cells.

Introduction

Type 1 diabetes is caused by the T cell mediated destruction of the Beta cells of iselts of langerhans. Previous report of diabetes triggering T cells, isolated from NOD mouse model. Several diabetogenic T cells clones isolated from NOD mice target two distinct HIPs and. BDC-2.5 and four additional T cell clones from BDC [1] Panel target the 2.5 HIP, a peptide formed by fusion of insulin C peptide fragment.

Flow Cytometery

Antibodies used for staining T cells were CD4BV711and CD25BV421, [2] CD8APCH7. Lymphocyte gate was based on forward scatter /side scatter properties and the singlets gate was based on FSC-A and FSC-H [3].

Peptides

The peptides used in this study were obtained from CHI scientific at a purity 95 percent or greater. The [4] insulin B chain amino acids 9-23 and the insB:9-23 R22E mimotope peptide was used [5].

Peripheral blood processing and Iselts, autoantibodies, and HLA type Peripheral blood was obtained from. T cell assay, genotyping and monitoring [5].

Discussion

We discussed about the type 1 diabetes and role of HIP. How it causes type 1 diabetes and role of interferon gamma.

Conclusion

Interferon gamma take over time to respond to HIP. HIP can triggered type 1 diabetes.

References

1. Islet-Derived CD4 T Cells Targeting Proinsulin in Human Autoimmune Diabetes – PMC.
2. Prediction of HLA-DQ8 β cell peptidome using a computational program and its relationship to autoreactive T cells – PMC.
3. Prediction of HLA-DQ8 β cell peptidome using a computational program and its relationship to autoreactive T cells – PMC.
4. The cation efflux transporter ZnT8 (Slc30A8) is a major autoantigen in human type 1 diabetes - PMC
5. Rapid CLIP dissociation from MHC II promotes an unusual antigen presentation pathway in autoimmunity – PubMed.