

# PRODUCT INFORMATION



## Insulin Peptide (sodium salt)

Item No. 45530

**Formal Name:** L-seryl-L-histidyl-L-leucyl-L-valyl-L- $\alpha$ -glutamyl-L-alanyl-L-leucyl-L-tyrosyl-L-leucyl-L-valyl-L-cysteinylglycyl-L- $\alpha$ -glutamyl-L-arginyl-glycine, sodium salt

**Synonyms:** InsB<sub>9-23</sub>, Insulin B: 9-23, Insulin B Chain (9-23), Preproinsulin (33-47) (human, mouse, rat, porcine, bovine, ovine)

H—Ser—His—Leu—Val—Glu—Ala—Leu—Tyr—Leu—Val—

Cys—Gly—Glu—Arg—Gly—OH

• XNa

**Peptide Sequence:** SHLVEALYLVCGERG-OH

**MF:** C<sub>72</sub>H<sub>116</sub>N<sub>20</sub>O<sub>22</sub>S • XNa

**FW:** 1,645.9

**Purity:** ≥90%

**Supplied as:** A solid

**Storage:** -20°C

**Stability:** ≥4 years

Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

### Laboratory Procedures

Insulin peptide (sodium salt) is supplied as a solid. A stock solution may be made by dissolving the insulin peptide (sodium salt) in the solvent of choice, which should be purged with an inert gas. Insulin peptide (sodium salt) is slightly soluble (0.1-1 mg/ml) in a 1:1 solution of methanol:chloroform.

### Description

Insulin peptide is a dominant immunogenic T cell epitope involved in the pathogenesis of type 1 diabetes.<sup>1,2</sup> It binds to HLA-DQ8 and I-Ag7 from non-obese diabetic (NOD) mice.<sup>1</sup> Insulin peptide induces proliferation in a lymph node proliferation assay using lymph node cells isolated from NOD mice immunized with insulin peptide.<sup>2</sup> Subcutaneous or intranasal administration of insulin peptide with incomplete Freund's adjuvant decreases the incidence of diabetes in NOD mice.

### References

1. Lee, K.H., Wucherpfennig, K.W., and Wiley, D.C. Structure of a human insulin peptide-HLA-DQ8 complex and susceptibility to type 1 diabetes. *Nat. Immunol.* **2**(6), 501-507 (2001).
2. Daniel, D. and Wegmann, D.R. Protection of nonobese diabetic mice from diabetes by intranasal or subcutaneous administration of insulin peptide B-(9-23). *Proc. Natl. Acad. Sci. U.S.A.* **93**(2), 956-960 (1996).

#### WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

#### SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the [complete](#) Safety Data Sheet, which has been sent via email to your institution.

#### WARRANTY AND LIMITATION OF REMEDY

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