



Product Data Sheet

Product Name:	Insulin B (9-23)	
Catalog Number:	AS-61532 (1 mg)	Lot Number: See label on vial
Sequence:	H-Ser-His-Leu-Val-Glu-Ala-Leu-Tyr-Leu-Val-Cys-Gly-Glu-Arg-Gly-OH (3-letter code) SHLVEALYLVCGERG (1-letter code)	
Molecular Weight:	1645.9	
Peptide Purity:	>95%	
Appearance:	Lyophilized white powder	

Peptide Reconstitution: Insulin B (9-32) peptide is freely soluble in DMSO.

Storage: Insulin B (9-32) peptide is shipped at ambient temperature. Upon receipt, store lyophilized peptide at -20°C or lower. Reconstituted peptide can be aliquoted and stored at -20°C or lower.

Description: This insulin B-chain peptide binds to a class II histocompatibility complex (MHC) allele called I-Ag7. A number of autoimmune diseases has been linked to class II proteins encoded by the MHC. Type 1 diabetes, or insulin-dependent diabetes mellitus, is a T cell-mediated disease that results in autoimmune destruction of pancreatic β cells leading to hyperglycemia. This insulin B peptide may be a self-antigen candidate that could initiate the disease. Immunization with this peptide in mice led to autoantibodies and insulinitis. Ref: Devendra, D. et al. *Diabetes* **54**, 2549 (2005). Starwalt, S. et al. *Protein Eng.* **16**, 147 (2003); Lee, L. et al. *PNAS* **102**, 15995 (2005).

Additional Information: Listed below are relevant information that may provide a guideline on how to use this product. End users will have to adapt to their own specific applications.

The OVA₃₂₃₋₃₃₉ (ISQAVHAAHAEINEAGR) and B:9-23 (SHLVEALYLVCGERG) peptides were from AnaSpec. Female NOD mice (6 wk of age) were injected four times (on days 1, 4, 7, and 10) with DEX in the two hind footpads (8 μg /footpad). For the day-7 injection, B:9-23 (1 μg /footpad) was coinjected with DEX. This regimen was given twice in a 2-wk interval. Glycosuria was checked weekly using Diastix strips (Bayer). Mice tested positive (≥ 250 mg/dl) twice consecutively were deemed diabetic-[Kang, Y. et al. *J Immunol* **180**, 5172 \(2008\).](#)

All peptides including insulin B (9-23) (SHLVEALYLVCGERG, MH⁺ 1645.8, catalog no. 61,532), a β -amyloid peptide fragment (CFRHDSGY, MH⁺ 984.4, catalog no. 61,979), PKC ζ 410 (GDTTSTFCGTPN MH⁺ 1200.5, catalog no. 62,025), and caspase 3 (163-175) (CRGTELDCGIETD, MH⁺ 1411.6, catalog no. 60,792) were purchased from AnaSpec (San Jose, CA). Two peptides, β -amyloid peptide and insulin B (9-23) were incubated with 10-fold molar excess of GSNO in different sample solutions-[Wang, y. et al. *J. Amer. Soc. Mass Spec.* **19**, 1353 \(2008\).](#)

Published Citations:

Kang, Y. et al. *J Immunol* **180**, 5172 (2008).
Wang, y. et al. *J. Amer. Soc. Mass Spec.* **19**, 1353 (2008).
Alam, C. et al. *Diabetologia* **53**, 346 (2010).

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