

Diazepam prodrug stabilizes human aminopeptidase B during lyophilization

Davin Rautiola¹, Joel L. Updyke¹, Kathryn M. Nelson^{2,3}, and Ronald A. Siegel^{1,4,*}

¹Department of Pharmaceutics, ²Institute for Therapeutics Discovery & Development,

³Department of Medicinal Chemistry, ⁴Department of Biomedical Engineering,

University of Minnesota, Minneapolis, MN

SUPPLEMENTAL INFORMATION

**Corresponding Author:*

Ronald A. Siegel, Sc.D.

Professor, Department of Pharmaceutics, College of Pharmacy

University of Minnesota, Minneapolis, MN 55455

Ph: (612) 624 6164, Fax: (612) 626 2125

Email: siege017@umn.edu

Table S1. Molar absorptivity temperature dependence.

Temp (°C)	Molar Absorptivity ($\mu\text{M}^{-1}\text{cm}^{-1}$)	
	LpNA	pNA
0	3.01E-05	0.00948
5	3.27E-05	0.00957
10	3.61E-05	0.00964
15	4.01E-05	0.00971
20	4.41E-05	0.00977
25	4.86E-05	0.00982
30	5.39E-05	0.00986
32	5.59E-05	0.00986
35	5.89E-05	0.00987
40	6.49E-05	0.00988
45	7.05E-05	0.00986

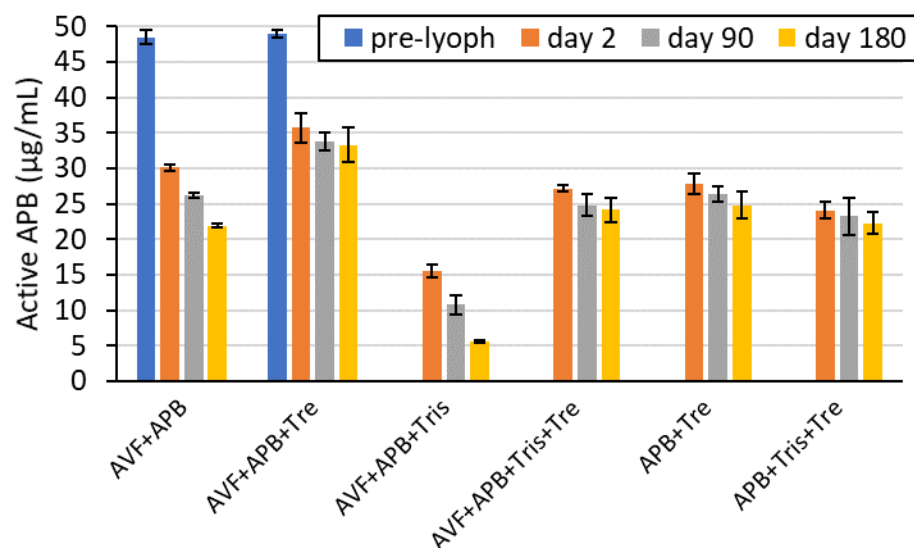


Figure S1. Lyophilizates formulations buffered with Tris. Optimum stability was achieved by co-lyophilization of APB+AVF+Tre without Tris buffer. Concentrations of active APB in the lyophilizates were measured in pH 7.4 PBS at 32 °C after storage for the specified time at 24 °C. Pre-lyophilization solutions contained AVF = 1.00 mM, APB = 50 $\mu\text{g}/\text{mL}$, Tre = 12.5 mg/mL , and/or pH 7.4 Tris buffer = 10 mM. Error bars are SD with $n = 3$.