

# PRODUCT INFORMATION



## DAPTA (acetate)

Item No. 33339

**Formal Name:** D-alanyl-L-seryl-L-threonyl-L-threonyl-L-threonyl-L-asparaginyl-L-tyrosyl-L-threoninamide, acetate

**Synonym:** D-Ala-peptide T-amide

**MF:** C<sub>35</sub>H<sub>56</sub>N<sub>10</sub>O<sub>15</sub> • XC<sub>2</sub>H<sub>4</sub>O<sub>2</sub>

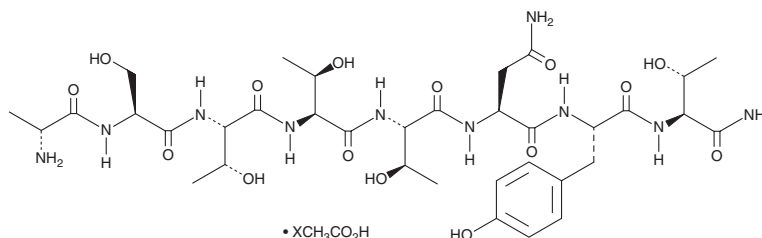
**FW:** 856.9

**Purity:** ≥98%

**Supplied as:** A crystalline 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

DAPTA (acetate) is supplied as a crystalline solid. A stock solution may be made by dissolving the DAPTA (acetate) in the solvent of choice, which should be purged with an inert gas. DAPTA (acetate) is soluble in the organic solvent DMSO at a concentration of approximately 1 mg/ml.

DAPTA (acetate) is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, DAPTA (acetate) should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. DAPTA (acetate) has a solubility of approximately 0.2 mg/ml in a 1:4 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

### Description

DAPTA is a peptide antagonist of chemokine (C-C motif) receptor 5 (CCR5).<sup>1</sup> It inhibits CD4-dependent binding of HIV-1<sub>Ba-L</sub> and HIV-1<sub>CM235</sub> gp120 envelope proteins to CCR5 (IC<sub>50</sub>s = 0.06 and 0.32 nM, respectively). DAPTA (0.1 mg/kg, i.p.) reduces marble burying and repetitive behavior, as well as decreases brain levels of IL-6, IL-9, and IL-17A, in the BTBR T<sup>+</sup> Itpr3tf/J mouse model of autism spectrum disorder (ASD).<sup>3</sup> It also reduces LPS-induced microglial activation and astrocyte hypertrophy in the dentate gyrus in a rat model of chronic neuroinflammation.<sup>2</sup>

### References

1. Polianova, M.T., Ruscetti, F.W., Pert, C.B., *et al.* Chemokine receptor-5 (CCR5) is a receptor for the HIV entry inhibitor peptide T (DAPTA). *Antiviral Res.* **67(2)**, 83-92 (2005).
2. Rosi, S., Pert, C.B., Ruff, M.R., *et al.* Chemokine receptor 5 antagonist D-Ala-peptide T-amide reduces microglia and astrocyte activation within the hippocampus in a neuroinflammatory rat model of Alzheimer's disease. *Neuroscience* **134(2)**, 671-676 (2005).
3. Ahmad, S.F., Ansari, M.A., Nadeem, A., *et al.* DAPTA, a C-C chemokine receptor 5 (CCR5) antagonist attenuates immune aberrations by downregulating Th9/Th17 immune responses in BTBR T<sup>+</sup> Itpr3tf/J mice. *Eur. J. Pharmacol.* **846**, 100-108 (2019).

#### 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

Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

Copyright Cayman Chemical Company, 11/02/2022

#### CAYMAN CHEMICAL

1180 EAST ELLSWORTH RD  
ANN ARBOR, MI 48108 · USA

**PHONE:** [800] 364-9897  
[734] 971-3335

**FAX:** [734] 971-3640

CUSTSERV@CAYMANCHEM.COM  
WWW.CAYMANCHEM.COM