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**Product Data Sheet**

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Product Name: Peptide T TFA

Cat. No.: GC32335

**Chemical Properties**

Cas. No. 1610056-01-3

SMILES Ala-Ser-Thr-Thr-Thr-Asn-Tyr-Thr

Formula  $C_{37}H_{56}F_3N_9O_{18}$  M.Wt 971.89

Solubility Soluble in DMSO Storage Store at -20°C

General tips For obtaining a higher solubility , please warm the tube at 37 °C and shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.

Shipping Condition Evaluation sample solution : ship with blue ice All other available size: ship with RT , or blue ice upon request.

Structure **Protocol****Cell experiment:**

Peripheral blood mononuclear cells are stimulated with PHA (5 mg/mL) along with various concentrations of peptide T (10<sup>-6</sup>-10<sup>-12</sup> M) for 48 h at 37°C. Supernatants are collected and frozen until analysis[3].

**Animal experiment:**

Rats[4] Peptide T (125, 250, 500, 800 µg) is randomly given subcutaneously to Female Lewis rats aged 6-8 weeks in the hind foot flanks in a final volume of 0.2 mL. Control animals receive the same volume of saline alone[4].

**Caution: Product has not been fully validated for medical applications. For research use only.**

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### References:

- [1]. Ruff MR, et al. Peptide T[4-8] is core HIV envelope sequence required for CD4 receptor attachment. *Lancet*. 1987 Sep 26;2(8561):751.
- [2]. Ruff MR, et al. Peptide T inhibits HIV-1 infection mediated by the chemokine receptor-5 (CCR5). *Antiviral Res*. 2001 Oct;52(1):63-75.
- [3]. Raychaudhuri SP, et al. Immunomodulatory effects of peptide T on Th 1/Th 2 cytokines. *Int J Immunopharmacol*. 1999 Sep;21(9):609-15.
- [4]. Sáez-Torres I, et al. Peptide T does not ameliorate experimental autoimmune encephalomyelitis (EAE) in Lewis rats. *Clin Exp Immunol*. 2000 Jul;121(1):151-6.

### Background

Peptide T (TFA) is an octapeptide from the V2 region of HIV-1 gp120. Peptide T is a ligand for the CD4 receptor and prevents binding of HIV to the CD4 receptor.

Peptide T acts to block viral entry as it inhibits in the MAGI cell assay and blocks infection in the luciferase reporter assay using HIV virions pseudotyped with ADA envelope. Peptide T selectively inhibits HIV replication using chemokine receptor CCR5 compared to CXCR4[2]. Peptide T at 10<sup>-8</sup> M induces IL-10 production by the human Th2 cell line and PBMC. Also peptide T at 10<sup>-9</sup> M concentration significantly inhibits IFN- $\gamma$  production by PBMC[3].

Peptide T is administered subcutaneously at different doses and phases of the

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experimental autoimmune encephalomyelitis (EAE) disease, but Peptide T neither prevents nor ameliorates EAE[4].

[1]. Ruff MR, et al. Peptide T[4-8] is core HIV envelope sequence required for CD4 receptor attachment. Lancet. 1987 Sep 26;2(8561):751. [2]. Ruff MR, et al. Peptide T inhibits HIV-1 infection mediated by the chemokine receptor-5 (CCR5). Antiviral Res. 2001 Oct;52(1):63-75. [3]. Raychaudhuri SP, et al. Immunomodulatory effects of peptide T on Th 1/Th 2 cytokines. Int J Immunopharmacol. 1999 Sep;21(9):609-15. [4]. Sáez-Torres I, et al. Peptide T does not ameliorate experimental autoimmune encephalomyelitis (EAE) in Lewis rats. Clin Exp Immunol. 2000 Jul;121(1):151-6.

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