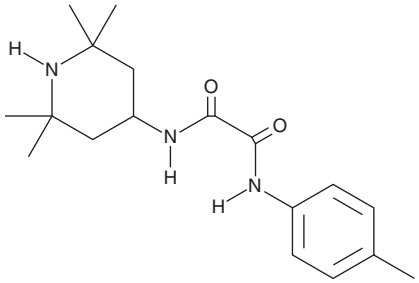
PRODUCT INFORMATION

YYA-021

Item No. 22915

CAS Registry No.:	144217-65-2
Formal Name:	N^1-(4-methylphenyl)-N^2-(2,2,6,6-tetramethyl-4-piperidinyl)-ethanediamide
MF:	$C_{18}H_{27}N_3O_2$
FW:	317.4
Purity:	≥98%
UV/Vis.:	λ_{max}: 276 nm
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

YYA-021 is supplied as a crystalline solid. A stock solution may be made by dissolving the YYA-021 in the solvent of choice, which should be purged with an inert gas. YYA-021 is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of YYA-021 in these solvents is approximately 0.125, 5, and 12 mg/ml, respectively.

YYA-021 is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, YYA-021 should first be dissolved in DMF and then diluted with the aqueous buffer of choice. YYA-021 has a solubility of approximately 0.03 mg/ml in a 1:30 solution of DMF:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

YYA-021 is a small molecule CD4 mimetic that competitively inhibits gp120 from interacting with CD4, preventing HIV entry into cells.[1] It inhibits infection of PM1/CCR5 cells from lab isolates of the HIV-1 strains IIIB (X4, Sub B) and 89.6 (dual, Sub B) (IC_{50}s = 23 and 41 µM, respectively) as well as clinical isolates of the fTOI (R5, Sub B) and KYAG strains (R5, Sub B) (IC_{50}s = 16 and 51 µM, respectively). It also inhibits HIV-1 infection of TZM-bl cells (IC_{50} = 8.4 µM) and reduces viability of mock-infected PM1/CCR5 cells with cytotoxic concentration (CC_{50}) values of 260 µM.[2]

References

1. Yamada, Y., Ochiai, C., Yoshumura, K., *et al.* CD4 mimics targeting the mechanism of HIV entry. *Bioorg. Med. Chem. Lett.* **20(1)**, 354-358 (2010).
2. Narumi, T., Arai, H., Yoshimura, K., *et al.* Small molecular CD4 mimics as HIV entry inhibitors. *Bioorg. Med. Chem.* **19(22)**, 6735-6742 (2011)

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