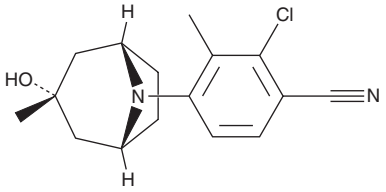
PRODUCT INFORMATION

ACP-105

Item No. 40146

CAS Registry No.:	899821-23-9
Formal Name:	2-chloro-4-[(3-endo)-3-hydroxy-3-methyl-8-azabicyclo[3.2.1]oct-8-yl]-3-methyl-benzonitrile
MF:	$C_{16}H_{19}ClN_2O$
FW:	290.8
Purity:	≥95%
Supplied as:	A 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

ACP-105 is supplied as a solid. A stock solution may be made by dissolving the ACP-105 in the solvent of choice, which should be purged with an inert gas. ACP-105 is soluble (≥10 mg/ml) in DMSO and slightly soluble (1-10 mg/ml) in ethanol.

Description

ACP-105 is a non-steroidal androgen receptor (AR) agonist.[1] It increases proliferation in a receptor selection and amplification technology (R-SAT) assay using NIH3T3 cells expressing AR or AR containing a tyrosine-to-alanine substitution at position 877 (AR^{T887A}; EC_{50}s = 1 and 0.4 nM, respectively). ACP-105 (1 mg/kg per day) inhibits radiation-induced decreases in contextual fear conditioning freezing time, indicating a reversal of memory deficits, in female mice.[2] It reduces the frequency of time spent in the external and intermediate zone in an open field test, indicating anxiolytic-like activity, in combination with the non-steroidal estrogen receptor β (ERβ) agonist AC-186 (Item No. 33526) in a gonadectomized 3xTg mouse model of Alzheimer's disease when administered at a dose of 10 mg/kg per day for four months.[3] ACP-105 (10 mg/kg per day for seven months), in combination with AC-186, decreases amyloid-β (1-40) (Aβ40) and Aβ42 levels in the brains, as well as increases the levels of ARs and the amyloid-β degrading enzymes neprilysin and insulin-degrading enzyme in the hippocampus, of gonadectomized 3xTg mice.

References

1. Schlienger, N., Lund, B.W., Pawlas, J., *et al.* Synthesis, structure-activity relationships, and characterization of novel nonsteroidal and selective androgen receptor modulators. *J. Med. Chem.* **52(22)**, 7186-7191 (2009).
2. Dayger, C., Villasana, L., Pfankuch, T., *et al.* Effects of the SARM ACP-105 on rotorod performance and cued fear conditioning in sham-irradiated and irradiated female mice. *Brain Res.* **1281**, 134-140 (2011).
3. George, S., Petit, G.H., Gouras, G.K., *et al.* Nonsteroidal selective androgen receptor modulators and selective estrogen receptor β agonists moderate cognitive deficits and amyloid-β levels in a mouse model of Alzheimer's disease. *ACS Chem. Neurosci.* **4(12)**, 1537-1548 (2013).

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