

AC-186

Chemical Properties

CAS No. : 1421854-16-1

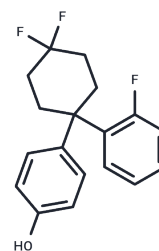
Formula: C₁₈H₁₇F₃O

Molecular Weight: 306.32

Store at low temperature

Storage: Powder: -20°C for 3 years | In solvent: -80°C for 1 year

Actual storage temperature shall be subject to the COA.



Biological Description

Description	AC-186 is a nonsteroidal estrogen receptor β (ER β) agonist with different affinities for ER β and ER α , with an EC ₅₀ of 6 nM for ER β and 5000 nM for ER α . AC-186 has neuroprotective activity and has been used in the study of Parkinson's disease.
Targets(IC50)	Estrogen Receptor/ERR,Estrogen/progestogen Receptor
In vitro	In LNCaP cells, AC-186 (10 μ M; 72 hours) inhibits the growth of LNCaP cells[1].
In vivo	In male Sprague-Dawley rats weighing 225-250 g, AC-186 (10 mg/kg; s.c.; once) prevented motor, cognitive, and sensorimotor gating deficits and mitigated the loss of dopamine neurons in the substantia nigra, but had no effect in females[1].

Solubility Information

Solubility	DMSO: 80 mg/mL (261.16 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+40% PEG300+5% Tween 80+45% Saline: 3.3 mg/mL (10.77 mM),Sonication is recommended. <i>Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one. Dissolve by heating and/or sonication if necessary. Working solution is recommended to be prepared and used immediately. The formulation provided above is for reference purposes only. In vivo formulations may vary and should be modified based on specific experimental conditions.</i>

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	3.2646 mL	16.3228 mL	32.6456 mL
5 mM	0.6529 mL	3.2646 mL	6.5291 mL
10 mM	0.3265 mL	1.6323 mL	3.2646 mL
50 mM	0.0653 mL	0.3265 mL	0.6529 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

- McFarland K, et al. AC-186, a selective nonsteroidal estrogen receptor β agonist, shows gender specific neuroprotection in a Parkinson's disease rat model. *ACS Chem Neurosci*. 2013 Sep 18;4(9):1249-55.
- Jian-Nong Ma, et al. Estrogen Receptor Beta Selective Agonists as Agents to Treat Chemotherapeutic-Induced Neuropathic Pain. *ACS Chem Neurosci*. 2016 Sep 21;7(9):1180-7.
- George S, Petit GH, Gouras GK, Brundin P, Olsson R. 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*. 2013 Dec 18;4(12):1537-48.
- Itoh N, et al. Bedside to bench to bedside research: Estrogen receptor beta ligand as a candidate neuroprotective treatment for multiple sclerosis. *J Neuroimmunol*. 2017 Mar 15;304:63-71.

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Tel: 781-999-4286 E_mail: info@targetmol.com Address: 34 Washington Street, Wellesley Hills, MA 02481