Product Data Sheet

Product Name: TAE-1
Cat. No.: GC17007

Chemical Properties

Cas. No.	1414469-59-2		
Chemical Name	2,2',2'-[1,3,5-triazine-2,4,6-triyltris(oxy-4,1-phenylenecarbonyloxy)]*tris*[N,N,N-trimethyl-ethanaminium]triiodide		
SMILES	O=C(OCC[N+](C)(C)C)C(C=C1)=CC=C1OC2=NC(OC3=CC=C(C(OCC[N+](C)(C)C)=O)C=C3)=NC(OC4=CC=C(C(OCC[N+](C)(C)C)=O)C=C4)=N2.[I-].[I-].[I-]		
Formula	$C_{39}H_{51}N_6O_9 \cdot 3I$	M.Wt	1128.6
Solubility	Acetonitrile: 5 mg/ml,DMF: 20 mg/ml,DMSO: 20 mg/ml,Ethanol: Partially soluble,PBS (pH 7.2): 5 mg/ml	Storage	Store at 2°C to 8°C
General tips	For obtaining a higher solubility , please warm the tube at 37 ℃ and shake it in the ultrasonic bath for a while.Stock solution can be stored below -20℃ 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	TAE-1		

Background

IC50: 0.3 ± 0.02 μM for AChE; 3.9 ± 0.2 μM for BuChE

TAE-1 is an inhibitor of amyloid-β fibril formation and aggregation.

Alzheimer’s disease (AD), a progressive neurodegenerative disorder, is characterized by the cerebral accumulation of insoluble aggregates of amyloid-β peptides (Aβ). Although the precise mechanisms governing neuronal loss remains ambiguous, toxicity resulting from Aβ-activated pathways is evident.

In vitro: In a previous study, the authors examined the effects of TAE-1 on differentiated human SH-SY5Y neuronal cells grown in tissue culture. Results showed that the

Tel: (909) 407-4943 Fax: (626) 353-8530 E-mail: tech@glpbio.com
Address: 10292 Central Ave. #205, Montclair, CA, USA

stimulation of neuronal cellular process length and branching was noted. Moreover, the increased synaptophysin suggested that TAE-1 could stimulate synapse formation. Increased expression of MAP2 was also observed, indicating that TAE-1 promoted the differentiation of human neurons. In addition, targeted AChE inhibition was evaluated by electrochemical quantification of the enzymatic product, thiocholine, on unmodified gold screen-printed electrodes. It was found that at increasing TAE-1concentrations, there was a corresponding decrease in the AChE activity resulting in reduced amount of oxidizable thiocholine. The IC50 value was found to be 0.465 μM for TAE-1 [1].

In vivo: Up to now, there is no animla in vivo data reported.

Clinical trial: So far, no clinical study has been conducted.

Reference:
[1] Veloso AJ, Chow AM, Dhar D, Tang DW, Ganesh HV, Mikhaylichenko S, Brown IR, Kerman K. Biological activity of sym-triazines with acetylcholine-like substitutions as multitarget modulators of Alzheimer's disease. ACS Chem Neurosci. 2013 Jun 19;4(6):924-9.

Tel: (909) 407-4943 Fax: (626) 353-8530 E-mail: tech@glpbio.com
Address: 10292 Central Ave. #205, Montclair, CA, USA