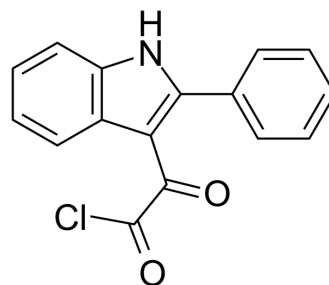


TSPO ligand-1

Cat. No.:	HY-150407
CAS No.:	4560-08-1
Molecular Formula:	C ₁₆ H ₁₀ ClNO ₂
Molecular Weight:	283.71
Target:	Ligands for Target Protein for PROTAC; Autophagy
Pathway:	PROTAC; Autophagy
Storage:	-20°C, protect from light, stored under nitrogen * In solvent : -80°C, 6 months; -20°C, 1 month (protect from light, stored under nitrogen)



SOLVENT & SOLUBILITY

In Vitro	DMSO : 125 mg/mL (440.59 mM; Need ultrasonic)				
		Solvent Concentration	Mass 1 mg	5 mg	10 mg
	Preparing Stock Solutions	1 mM	3.5247 mL	17.6236 mL	35.2473 mL
		5 mM	0.7049 mL	3.5247 mL	7.0495 mL
		10 mM	0.3525 mL	1.7624 mL	3.5247 mL
Please refer to the solubility information to select the appropriate solvent.					
In Vivo	1. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline Solubility: ≥ 2.5 mg/mL (8.81 mM); Clear solution 2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline) Solubility: ≥ 2.5 mg/mL (8.81 mM); Clear solution				

BIOLOGICAL ACTIVITY

Description	TSPO ligand-1 is the ligand of AUTAC4 (HY-134640) that can be used in the synthesis of PROTACs. TSPO ligand-1 is a mitochondrial outer membrane transmembrane structural domain protein can bind to AUTAC4 and regulate mitochondrial autophagy to promote targeted mitochondrial renewal. TSPO ligand-1 is also involved in the transport of cholesterol from the outer to inner mitochondrial membrane and serves as a sensitive biomarker of brain injury and neurodegeneration ^{[1][2]} .
In Vitro	<p>TSPO ligand-1 gene is induced to increase expression in the context of selective activation of neurons in male C57Bl6/N mice. Moreover, neuronal activation under physiological and psychopharmacological conditions also results in increased TSPO levels in adult mice^[2].</p> <p>TSPO ligand-1 can serve as the sole marker of glial cell activity in Alzheimer's disease thus tracking the formation of different neural cells^[3].</p> <p>TSPO ligand-1 can regulate mitochondrial fatty acid oxidation (FAO) and thus effects mitochondrial energy homeostasis in</p>

MA-10 Leydig cell line^[4].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

- [1]. Takahashi D, et al. AUTACs: Cargo-Specific Degraders Using Selective Autophagy. *Mol Cell*. 2019 Dec 5;76(5):797-810.e10.
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- [3]. Benjamin B Tournier, et al. Astrocytic TSPO Upregulation Appears Before Microglial TSPO in Alzheimer's Disease. *J Alzheimers Dis*. 2020;77(3):1043-1056. doi: 10.3233/JAD-200136.
- [4]. Lan N Tu, et al. Translocator Protein (TSPO) Affects Mitochondrial Fatty Acid Oxidation in Steroidogenic Cells. *Endocrinology*. 2016 Mar;157(3):1110-21. doi: 10.1210/en.2015-1795. Epub 2016 Jan 7.
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Caution: Product has not been fully validated for medical applications. For research use only.

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