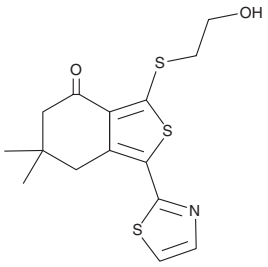
PRODUCT INFORMATION

TB 21007

Item No. 27674

CAS Registry No.:	207306-50-1
Formal Name:	6,7-dihydro-3-[(2-hydroxyethyl) thio]-6,6-dimethyl-1-(2-thiazolyl)-benzo[c]thiophen-4(5H)-one
MF:	$C_{15}H_{17}NO_2S_3$
FW:	339.5
Purity:	≥98%
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

TB 21007 is supplied as a solid. A stock solution may be made by dissolving the TB 21007 in the solvent of choice, which should be purged with an inert gas. TB 21007 is soluble in organic solvents such as ethanol and DMSO. The solubility of TB 21007 in these solvents is approximately 25 and 100 mM, respectively.

Description

TB 21007 is an inverse agonist of $\alpha_5\beta_3\gamma_2$ subunit-containing $GABA_A$ receptors (K_i = 1.6 nM).[1] It selectively inhibits $\alpha_5\beta_3\gamma_2$ subunit-containing $GABA_A$ receptors over α_{1-4} and α_6 subunit-containing $GABA_A$ receptors that also contain β_3 and γ_2 subunits (K_is = 20, 16, 20, 106, and 1,800 nM, respectively). TB 21007 reduces the latency to find the hidden platform in a matching-to-place variant of the Morris water maze, indicating enhanced spatial memory, in rats when administered at a dose of 0.3 mg/kg. It reduces paw tactile allodynia induced by reserpine (Item No. 16474) in a rat model of fibromyalgia-like pain when administered intrathecally at doses of 1.5, 15, and 150 nmol.[2]

References

1. Chambers, M.S., Atack, J.R., Broughton, H.B., *et al.* Identification of a novel, selective $GABA_A$ α5 receptor inverse agonist which enhances cognition. *J. Med. Chem.* **46(11)**, 2227-2240 (2003).
2. De la Luz-Cuellar, Y.E., Rodríguez-Palma, E.J., Franco-Enzástiga, Ú., *et al.* Blockade of spinal α_5-$GABA_A$ receptors differentially reduces reserpine-induced fibromyalgia-type pain in female rats. *Eur. J. Pharmacol.* **858**, 172443 (2019).

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