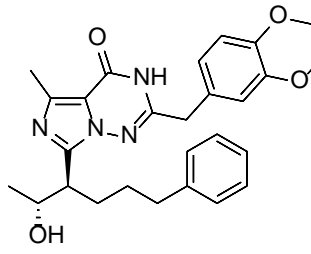


Product data sheet



MedKoo Cat#: 522495 Name: BAY60-7550 CAS#: 439083-90-6 Chemical Formula: C ₂₇ H ₃₂ N ₄ O ₄ Exact Mass: 476.2424 Molecular Weight: 476.58	
Product supplied as:	Powder
Purity (by HPLC):	≥ 98%
Shipping conditions	Ambient temperature
Storage conditions:	Powder: -20°C 3 years; 4°C 2 years. In solvent: -80°C 3 months; -20°C 2 weeks.

1. Product description:

BAY-60-7550 is a potent PDE2 inhibitor with IC₅₀ values of 2.0 nM (bovine) and 4.7 nM (human). BAY-60-7550 antagonizes oxidative stress-induced anxiety-like behavioral effects in mice by increasing cGMP signaling. Phosphodiesterases (PDEs) are key regulatory enzymes of intracellular cAMP/cGMP levels. These second messengers play important regulatory roles in controlling steroidogenesis in the adrenal. Disruption of PDEs has been associated with a number of adrenal diseases.

2. CoA, QC data, SDS, and handling instruction

SDS and handling instruction, CoA with copies of QC data (NMR, HPLC and MS analytical spectra) can be downloaded from the product web page under “QC And Documents” section. Note: copies of analytical spectra may not be available if the product is being supplied by MedKoo partners. Whether the product was made by MedKoo or provided by its partners, the quality is 100% guaranteed.

3. Solubility data

Solvent	Max Conc. mg/mL	Max Conc. mM
DMSO	21.65	45.43
Ethanol	10.0	20.98

4. Stock solution preparation table:

Concentration / Solvent Volume / Mass	1 mg	5 mg	10 mg
1 mM	2.10 mL	10.49 mL	20.98 mL
5 mM	0.42 mL	2.10 mL	4.20 mL
10 mM	0.21 mL	1.05 mL	2.10 mL
50 mM	0.04 mL	0.21 mL	0.42 mL

5. Molarity Calculator, Reconstitution Calculator, Dilution Calculator

Please refer the product web page under section of “Calculator”

6. Recommended literature which reported protocols for in vitro and in vivo study

In vitro study

TBD

In vivo study

- Chen L, Liu K, Wang Y, Liu N, Yao M, Hu J, Wang G, Sun Y, Pan J. Phosphodiesterase-2 inhibitor reverses post-traumatic stress induced fear memory deficits and behavioral changes via cAMP/cGMP pathway. *Eur J Pharmacol.* 2021 Jan 15;891:173768. doi: 10.1016/j.ejphar.2020.173768. Epub 2020 Dec 1. PMID: 33271150.
- Soares LM, Meyer E, Milani H, Steinbusch HW, Prickaerts J, de Oliveira RM. The phosphodiesterase type 2 inhibitor BAY 60-7550 reverses functional impairments induced by brain ischemia by decreasing hippocampal neurodegeneration and enhancing hippocampal neuronal plasticity. *Eur J Neurosci.* 2017 Feb;45(4):510-520. doi: 10.1111/ejn.13461. Epub 2016 Nov 28. PMID: 27813297.

7. Bioactivity

Biological target: Bay 60-7550 is a PDE2 inhibitor with a K_i of 3.8 nM.

Product data sheet



In vitro activity

TBD

In vivo activity

Whether PDE2 inhibition could rescue post-traumatic stress disorder (PTSD)-like symptoms was evaluated. Mice were subjected to single prolonged stress (SPS) and treated with selective PDE2 inhibitor Bay 60-7550 (0.3, 1, or 3 mg/kg, i.p.). The behavioral tests such as forced swimming, sucrose preference test, open field, elevated plus maze, and contextual fear paradigm were conducted to determine the effects of Bay 60-7550 on SPS-induced depression- and anxiety-like behavior and fear memory deficits. The results suggested that Bay 60-7550 reversed SPS-induced depression- and anxiety-like behavior and fear memory deficits. Moreover, Bay 60-7550 prevented SPS-induced changes in the adrenal gland index, synaptic proteins synaptophysin and PSD95 expression, PKA, PKG, pCREB, and BDNF levels in the hippocampus and amygdala. These findings suggest that Bay 60-7550 protects mice against PTSD-like stress induced traumatic injury by activation of cGMP- or cAMP-related neuroprotective molecules, such as synaptic proteins, pCREB and BDNF.

Reference: Eur J Pharmacol. 2021 Jan 15;891:173768.

<https://www.sciencedirect.com/science/article/abs/pii/S0014299920308608?via%3Dihub>

Note: The information listed here was extracted from literature. MedKoo has not independently retested and confirmed the accuracy of these methods. Customer should use it just for a reference only.