

# Produktinformation



Forschungsprodukte & Biochemikalien
Zellkultur & Verbrauchsmaterial
Diagnostik & molekulare Diagnostik
Laborgeräte & Service

Weitere Information auf den folgenden Seiten! See the following pages for more information!



Lieferung & Zahlungsart siehe unsere Liefer- und Versandbedingungen

# Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

# SZABO-SCANDIC HandelsgmbH

Quellenstraße 110, A-1100 Wien T. +43(0)1 489 3961-0 F. +43(0)1 489 3961-7 <u>mail@szabo-scandic.com</u> www.szabo-scandic.com

# Product Information



## **Biphenylindanone** A

Item No. 11986

CAS Registry No.:	866823-73-6
Formal Name:	3'-[[(2-cyclopentyl-2,3-dihydro-6,7-
	dimethyl-1-oxo-1H-inden-5-yl)oxy]
	methyl]-[1,1'-biphenyl]-4-carboxylic acid
Synonyms:	BINA, MRLSD 230
MF:	$C_{30}H_{30}O_4$
FW:	454.6
Purity:	≥98%
Stability:	≥2 years at -20°C
Supplied as:	A crystalline solid
UV/Vis.:	λ <sub>max</sub> : 209, 271 nm



#### Laboratory Procedures

For long term storage, we suggest that biphenylindanone A (BINA) be stored as supplied at -20°C. It should be stable for at least two years.

BINA is supplied as a crystalline solid. A stock solution may be made by dissolving the BINA in the solvent of choice. BINA is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide, which should be purged with an inert gas. The solubility of BINA in these solvents is approximately 0.2, 1.3, and 1.6 mg/ml, respectively.

BINA is sparingly soluble in aqueous solutions. To enhance aqueous solubility, dilute the organic solvent solution into aqueous buffers or isotonic saline. If performing biological experiments, ensure the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. We do not recommend storing the aqueous solution for more than one day.

The metabotropic glutamate receptor 2 (mGluR2) is a  $G_{i/o}$ -coupled receptor which is expressed on presynaptic nerve terminals and modulates the release of neurotransmitters like glutamate and GABA.<sup>1</sup> BINA is a positive allosteric modulator of mGluR2, stimulating the human and rat receptors with EC50 values of 33.2 and 96 nM, respectively.<sup>2</sup> It has no effect on glutamate-induced activation of other mGluR types.<sup>2</sup> BINA can be used on cells, tissues, or animals.<sup>2,3</sup> Because of its selectivity for mGluR2, robust in vivo activity, and brain penetrance, BINA can be used to elucidate the role of mGluR2 in such diverse processes as psychosis, schizophrenia, and drug addiction.<sup>4-6</sup>

#### References

- 1. Tresadern, G., Cid, J.M., Macdonald, G.J., et al. Scaffold hopping from pyridones to imidazo[1,2-α]pyridines. New positive allosteric modulators of metabotropic glutamate 2 receptor. Bioorg. Med. Chem. Lett. 20(1), 175-179 (2010).
- Galici, R., Jones, C.K., Hemstapat, K., et al. Biphenyl-indanone A, a positive allosteric modulator of the metabotropic 2. glutamate receptor subtype 2, has antipsychotic- and anxiolytic-like effects in mice. J. Pharmacol. Exp. Ther. 318(1), 173-185 (2006).
- 3. Dhanya, R.-P., Sidique, S., Sheffler, D.J., et al. Design and synthesis of an orally active metabotropic glutamate receptor subtype-2 (mGluR2) positive allosteric modulator (PAM) that decreases cocaine self-administration in rats. J. Med. Chem. 54(1), 342-353 (2011).
- Benneyworth, M.A., Xiang, Z., Smith, R.L., et al. A selective positive allosteric modulator of metabotropic glutamate receptor subtype 2 blocks a hallucinogenic drug model of psychosis. Mol. Pharmacol. 72(2), 477-484 (2007).
- 5. Hackler, E.A., Byun, N.E., Jones, C.K., et al. Selective potentiation of the metabotropic glutamate receptor subtype 2 blocks phencyclidine-induced hyperlocomotion and brain activation. Neuroscience 168, 209-218 (2010).
- Jin, X., Semenova, S., Yang, L., et al. The mGluR2 positive allosteric modulator BINA decreases cocaine self-6. administration and cue-induced cocaine-seeking and counteracts cocaine-induced enhancement of brain reward function in rats. Neuropsychopharmacology 35(10), 2021-2036 (2010).

#### **Related Products**

For a list of related products please visit: www.caymanchem.com/catalog/11986

WARNING: THIS PRODUCT IS FOR LABORATORY RESEARCH ONLY: NOT FOR ADMINISTRATION TO HUMANS. NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

#### MATERIAL SAFETY DATA

This material should be considered hazardous until information to the contrary becomes available. Do not ingest, swallow, or inhale. Do not get in eyes, on skin, or on clothing. Wash thoroughly after handling. This information contains some, <u>but not all</u>, of the information required for the safe and proper use of this material. Before use, the user <u>must</u> review the <u>complete</u> Material Safety Data Sheet, which has been sent *via* email to your institution.

#### WARRANTY AND LIMITATION OF REMEDY

Cayman Chemical Company makes **no warranty or guarantee** of any kind, whether written or oral, expressed or implied, including without limitation, any warranty of fitness for a particular purpose, suitability and merchantability, which extends beyond the description of the chemicals hereof. Cayman **warrants only** to the original customer that the material will meet our specifications at the time of delivery.

The time of delivery. Cayman will carry out its delivery obligations with due care and skill. Thus, in no event will Cayman have **any obligation or liability**, whether in tort (including negligence) or in contract, for direct, indirect, incidental or consequential damages, even if Cayman is informed about their possible existence. This limitation of liability does not apply in the case of intentional acts or negligence of Cayman, its directors or its employees. Buyer's **exclusive remedy** and Cayman's sole liability hereunder shall be limited to a <u>refund</u> of the purchase price, or at Cayman's potion, the <u>replacement</u>, at no cost to Buyer, of all material that

buyer sectors remedy and caymans sole nability netconnet stan be innited to a <u>remain</u> of the purchase price, or a Caymans option, the <u>reparement</u>, at no cost to buyer, or an inacrial that does not meet court specifications. Said refund or replacement is conditioned on Buyer giving written notice to Cayman within thirty (30) days after arrival of the material at its destination. Failure of Buyer to give said notice within thirty (30) days shall constitute a waiver by Buyer of all claims hereunder with respect to said material. For further details, please refer to our Warranty and Limitation of Remedy located on our website and in our catalog. Copyright Cayman Chemical Company, 12/18/2012

**Cayman Chemical** 

#### **Mailing address**

1180 E. Ellsworth Road Ann Arbor, MI 48108 USA

Phone (800) 364-9897 (734) 971-3335

Fax (734) 971-3640

#### E-Mail

custserv@caymanchem.com

### Web

www.caymanchem.com