Product Information

MCHB-1
Item No. 9001949

CAS Registry No.: 1046140-32-2
Formal Name: 1-(cyclohexylmethyl)-2-[(4-ethoxyphenyl)methyl]-N,N-diethyl-1H-benzimidazole-5-carboxamide
Synonym: N-Methylcyclohexyl benzimidazole analog 1
MF: C28H37N3O2
FW: 447.6
Purity: ≥98%
Stability: ≥2 years at -20°C
Supplied as: A crystalline solid
UV/Vis.: \( \lambda_{\text{max}}: 217, 281 \text{ nm} \)

Laboratory Procedures

For long term storage, we suggest that MCHB-1 be stored as supplied at -20°C. It should be stable for at least two years. MCHB-1 is supplied as a crystalline solid. A stock solution may be made by dissolving the MCHB-1 in the solvent of choice. MCHB-1 is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF), which should be purged with an inert gas. The solubility of MCHB-1 in ethanol and DMF is approximately 30 mg/ml and approximately 25 mg/ml in DMSO.

MCHB-1 is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, MCHB-1 should first be dissolved in ethanol and then diluted with the aqueous buffer of choice. MCHB-1 has a solubility of approximately 0.2 mg/ml in a 1:4 solution of ethanol:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Several benzimidazole derivatives, developed as synthetic cannabinoid (CB) receptor agonists, have been identified as being selective for the peripheral CB2 receptor.1 MCHB-1 is a potent agonist of the human CB2 receptor (\( EC_{50} = 0.52 \text{ nM} \)) that shows high selectivity for CB2 over central CB1 (\( K_{i} = 3.7 \text{ and } 110 \text{ nM} \), respectively).1 Similar benzimidazole compounds significantly reduce peripheral pain with reduced central nervous system side effects in mice.2 This product is intended for forensic and research applications.

References

Related Products
For a list of related products please visit: www.caymanchem.com/catalog/9001949

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

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, but not all, of the information required for the safe and proper use of this material. Before use, the user must review the complete 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.

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 any 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 refund of the purchase price, or at Cayman’s option, the replacement, at no cost to Buyer, of all material that does not meet our specifications.

For further details, please refer to our Warranty and Limitation of Remedy located on our website and in our catalog.