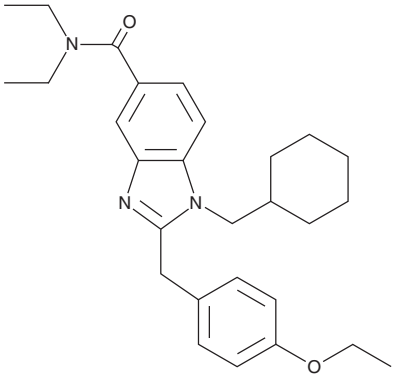
PRODUCT INFORMATION

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:	$C_{28}H_{37}N_3O_2$
FW:	447.6
Purity:	≥98%
UV/Vis.:	λ_{max}: 217, 281 nm
Supplied as:	A crystalline solid
Storage:	-20°C
Stability:	≥2 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

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.

Description

MCHB-1 is a potent agonist of the human cannabinoid 2 (CB_2) receptor (EC_{50} = 0.52 nM) that shows high selectivity for CB_2 over CB_1 (K_is = 3.7 and 110 nM, respectively).[1] Similar benzimidazole compounds significantly reduce peripheral pain with reduced central nervous system side effects in mice.[2]

References

1. Pagé, D., Balaux, E., Boisvert, L., *et al.* Novel benzimidazole derivatives as selective CB_2 agonists. *Bioorganic & Medicinal Chemistry Letters* **18(13)**, 3695-3700 (2008).
2. Yu, X.H., Cao, C.Q., Martino, G., *et al.* A peripherally restricted cannabinoid receptor agonist produces robust anti-nociceptive effects in rodent models of inflammatory and neuropathic pain. *Pain* **151(2)**, 337-344 (2010).

WARNING
THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA
This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. 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
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