

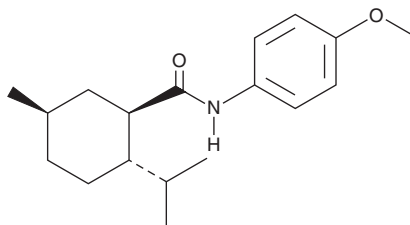
PRODUCT INFORMATION



WS-12

Item No. 30352

CAS Registry No.: 68489-09-8
Formal Name: (1R,2S,5R)-N-(4-methoxyphenyl)-5-methyl-2-(1-methylethyl)-cyclohexanecarboxamide
MF: $C_{18}H_{27}NO_2$
FW: 289.4
Purity: $\geq 98\%$
UV/Vis.: λ_{max} : 251 nm
Supplied as: A crystalline solid
Storage: $-20^{\circ}C$
Stability: ≥ 4 years



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

Laboratory Procedures

WS-12 is supplied as a crystalline solid. A stock solution may be made by dissolving the WS-12 in the solvent of choice. WS-12 is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF), which should be purged with an inert gas. The solubility of WS-12 in ethanol and DMSO is approximately 5 mg/ml and approximately 10 mg/ml in DMF.

Description

WS-12 is an agonist of transient receptor potential melastatin 8 (TRPM8).¹ It induces currents in *Xenopus* oocytes expressing mouse TRPM8 ($EC_{50} = 12 \mu M$) and is selective for TRPM8 over transient receptor potential vanilloid 1-4 (TRPV1-4) and transient receptor potential ankyrin 1 (TRPA1) at 1 mM. WS-12 (6 nmol, i.c.v.) reduces nociceptive behavior induced by capsaicin (Item Nos. 92350 | 10010743) in wild-type, but not *Trpm8*^{-/-}, mice.² It induces analgesia in the hot plate test, an effect that can be reversed by the opioid receptor antagonist naloxone, in mice.

References

1. Sherkheli, M.A., Gisselmann, G., Vogt-Eisele, A.K., *et al.* Menthol derivative WS-12 selectively activates transient receptor potential melastatin-8 (TRPM8) ion channels. *Pak. J. Pharm. Sci.* **21**(4), 370-378 (2008).
2. Liu, B., Fan, L., Balakrishna, S., *et al.* TRPM8 is the principal mediator of menthol-induced analgesia of acute and inflammatory pain. *Pain* **154**(10), 2169-2177 (2013).

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.

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