

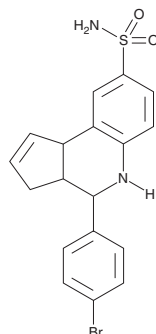
PRODUCT INFORMATION



4BP-TQS

Item No. 21881

CAS Registry No.: 360791-49-7
Formal Name: 4-(4-bromophenyl)-3a,4,5,9b-tetrahydro-3H-cyclopenta[c]quinoline-8-sulfonamide
MF: C₁₈H₁₇BrN₂O₂S
FW: 405.3
Purity: ≥98%
UV/Vis.: λ_{max}: 275 nm
Supplied as: A crystalline solid
Storage: -20°C
Stability: ≥4 years



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

Laboratory Procedures

4BP-TQS is supplied as a crystalline solid. A stock solution may be made by dissolving the 4BP-TQS in the solvent of choice, which should be purged with an inert gas. 4BP-TQS is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. The solubility of 4BP-TQS in these solvents is approximately 30 mg/ml.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. Organic solvent-free aqueous solutions of 4BP-TQS can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of 4BP-TQS in PBS, pH 7.2, is approximately 10 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

4BP-TQS is an allosteric agonist of α7 subunit-containing neuronal nicotinic acetylcholine receptors (nAChRs).¹ It activates human α7 subunit-containing nAChRs expressed in *X. laevis* oocytes more potently than acetylcholine (Item No. 23829; EC₅₀s = 17 and 128 μM, respectively). It is selective for α7 subunit-containing nAChRs, having no activity for α1β1δε-, α3β4-, and α4β2 subunit-containing nAChRs at 100 μM.² 4BP-TQS (10 μM) potentiates acetylcholine-induced activation of α7 subunit-containing nAChRs by greater than 540-fold in *X. laevis* oocytes.¹ It activates wild-type α7 subunit-containing nAChRs and nAChRs containing the α7 subunit and W148F, but not M253L, mutations in *X. laevis* oocytes.

References

1. Gill, J.K., Savolainen, M., Young, G.T., *et al.* Agonist activation of α7 nicotinic acetylcholine receptors via an allosteric transmembrane site. *Proc. Natl. Acad. Sci. U.S.A.* **108**(14), 5867-5872 (2011).
2. Gill, J.K., Chatzidaki, A., Ursu, D., *et al.* Contrasting properties of α7-selective orthosteric and allosteric agonists examined on native nicotinic acetylcholine receptors. *PLoS One* **8**(1), e55047 (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.

WARRANTY AND LIMITATION OF REMEDY

Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

Copyright Cayman Chemical Company, 11/07/2022

CAYMAN CHEMICAL

1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA

PHONE: [800] 364-9897
[734] 971-3335

FAX: [734] 971-3640

CUSTSERV@CAYMANCHEM.COM
WWW.CAYMANCHEM.COM