

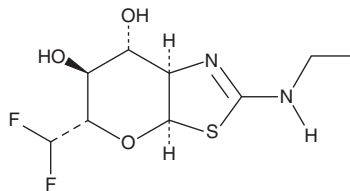
PRODUCT INFORMATION



MK-8719

Item No. 34054

CAS Registry No.: 1382799-40-7
Formal Name: 5S-(difluoromethyl)-2-(ethylamino)-3aR,6S,7R,7aR-tetrahydro-5H-pyrano[3,2-d]thiazole-6,7-diol
MF: C₉H₁₄F₂N₂O₃S
FW: 268.3
Purity: ≥95%
Supplied as: A 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

MK-8719 is supplied as a solid. A stock solution may be made by dissolving the MK-8719 in the solvent of choice, which should be purged with an inert gas. MK-8719 is sparingly soluble (1-10 mg/ml) in methanol and slightly soluble (0.1-1 mg/ml) in acetonitrile.

MK-8719 is slightly soluble (0.1-1 mg/ml) 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.

Description

MK-8719 is an inhibitor of O-GlcNAcase (OGA; $K_i = 7.9$ nM for the human enzyme).¹ It is selective for OGA over β -hexosaminidase ($K_i = >10,000$ nM for the human enzyme). MK-8719 increases the levels of O-GlcNAcylated proteins in rat PC12 adrenal medulla cells ($EC_{50} = 52.7$ nM). It increases brain levels of O-GlcNAcylated proteins in rats when administered at a dose of 10 mg/kg. Dietary administration of MK-8719 reduces the levels of aggregated tau proteins in the brain, the levels of neurofibril tangles in the entorhinal cortex, and spontaneous locomotor activity, as well as increases cortex, hippocampal, and lateral ventricular volume and forebrain weight, in an rTg4510 transgenic mouse model of Alzheimer's disease.²

References

1. Selnick, H.G., Hess, J.F., Tang, C., *et al.* Discovery of MK-8719, a potent O-GlcNAcase inhibitor as a potential treatment for tauopathies. *J. Med. Chem.* **62**(22), 10062-10097 (2019).
2. Wang, X., Li, W., Marcus, J., *et al.* MK-8719, a novel and selective O-GlcNAcase inhibitor that reduces the formation of pathological tau and ameliorates neurodegeneration in a mouse model of tauopathy. *J. Pharmacol. Exp. Ther.* **374**(2), 252-263 (2020).

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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