

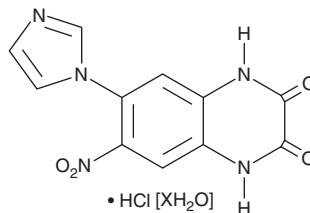
PRODUCT INFORMATION



YM-90K (hydrochloride hydrate)

Item No. 30683

Formal Name: 1,4-dihydro-6-(1H-imidazol-1-yl)-7-nitro-2,3-quinoxalinedione, monohydrochloride, hydrate
MF: C₁₁H₇N₅O₄ • HCl [XH₂O]
FW: 309.7
Purity: ≥98%
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

YM-90K (hydrochloride hydrate) is supplied as a solid. A stock solution may be made by dissolving the YM-90K (hydrochloride hydrate) in the solvent of choice, which should be purged with an inert gas. YM-90K (hydrochloride hydrate) is soluble in the organic solvent DMSO at a concentration of approximately 5 mg/ml.

Description

YM-90K is an AMPA receptor antagonist ($K_i = 0.084 \mu\text{M}$ in a radioligand binding assay using rat brain membranes).¹ It is selective for AMPA over kainate, NMDA-sensitive glutamate, and strychnine-insensitive glycine receptors (K_i s = 2.2, >100, and 37 μM , respectively). Intrastriatal administration of YM-90K inhibits AMPA-induced decreases in choline acetyltransferase (ChAT) activity in rat striatum *ex vivo* in a dose-dependent manner. It inhibits audiogenic seizures in susceptible DBA/2 mice with a minimum effective dose of 3 mg/kg when administered intraperitoneally. Intravenous infusion of YM-90K (20 mg/kg per hour for 4 hours) reduces infarct size in a rat model of focal cerebral ischemia induced by thrombotic middle cerebral artery occlusion (MCAO) in rats.²

References

1. Ohmori, J., Sakamoto, S., Kubota, H., *et al.* 6-(1H-Imidazol-1-yl)-7-nitro-2,3(1H,4H)-quinoxalinedione hydrochloride (YM90K) and related compounds: Structure-activity relationships for the AMPA-type non-NMDA receptor. *J. Med. Chem.* **37**(4), 467-475 (1994).
2. Umemura, K., Shimakura, A., and Nakashima, M. Neuroprotective effect of a novel AMPA receptor antagonist, YM90K, in rat focal cerebral ischaemia. *Brain Res.* **773**(1-2), 61-65 (1997).

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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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