

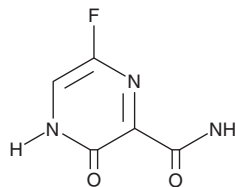
PRODUCT INFORMATION



T-705

Item No. 23384

CAS Registry No.: 259793-96-9
Formal Name: 6-fluoro-3,4-dihydro-3-oxo-2-pyrazinecarboxamide
Synonym: Favilavir, Favipiravir
MF: C₅H₄FN₃O₂
FW: 157.1
Purity: ≥98%
UV/Vis.: λ_{max}: 222, 323 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

T-705 is supplied as a crystalline solid. A stock solution may be made by dissolving the T-705 in the solvent of choice, which should be purged with an inert gas. T-705 is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. The solubility of T-705 in these solvents is approximately 0.2, 30, and 25 mg/ml, respectively.

T-705 is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, T-705 should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. T-705 has a solubility of approximately 0.1 mg/ml in a 1:10 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

T-705 is an antiviral agent that inhibits influenza A, B, and C (IC₅₀s = 0.013-0.48 µg/ml) without inducing cytotoxicity up to 1,000 µg/ml.¹ It inhibits a neuraminidase-resistant influenza strain (GS4071-resistant; IC₅₀ = 0.095 µg/ml) and RNA viruses (IC₅₀s = 4.8-41 µg/ml) but not DNA viruses at concentrations greater than 100 µg/ml. It is active against a variety of viruses, including bunyavirus, arenavirus, and West Nile virus *in vitro* and *in vivo* in mice.² T-705 undergoes phosphoribosylation to form T-705-RTP, which inhibits RNA-dependent RNA polymerase (RdRp) in RNA viruses.³ In mice infected with influenza virus, T-705 (200 mg/kg once daily) decreases the rate of mortality and reduces the lung virus yield in a dose-dependent manner at doses ranging from 50-200 mg/kg per day.

References

1. Furuta, Y., Takahashi, K., Fukuda, Y., *et al.* In vitro and in vivo activities of anti-influenza virus compound T-705. *Antimicrob. Agents and Chemother.* **46(4)**, 977-981 (2002).
2. Furuta, Y., Takahashi, K., Shiraki, K., *et al.* T-705 (favipiravir) and related compounds: Novel broad-spectrum inhibitors of RNA viral infections. *Antiviral Res.* **82(3)**, 95-102 (2009).
3. Furuta, Y., Takahashi, K., Kuno-Maekawa, M., *et al.* Mechanism of action of T-705 against influenza virus. *Antimicrob. Agents and Chemother.* **49(3)**, 981-986 (2005).

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