# PRODUCT INFORMATION

## T-705

*Item No. 23384*

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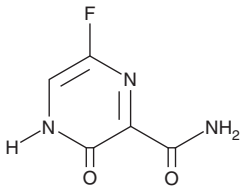
| **CAS Registry No.:** | 259793-96-9 |
| **Formal Name:** | 6-fluoro-3,4-dihydro-3-oxo-2-pyrazinecarboxamide |
| **Synonym:** | Favilavir, Favipiravir |
| **MF:** | $C_5H_4FN_3O_2$ |
| **FW:** | 157.1 |
| **Purity:** | ≥98% |
| **UV/Vis.:** | $\lambda_{max}$: 222, 323 nm |
| **Supplied as:** | A crystalline 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 ($IC_{50}$s = 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; $IC_{50}$ = 0.095 µg/ml) and RNA viruses ($IC_{50}$s = 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).





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