

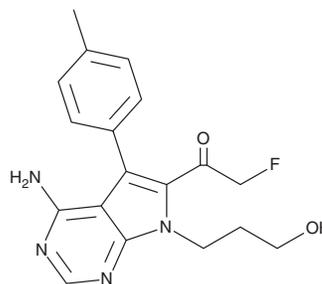
# PRODUCT INFORMATION



## FMK

Item No. 9000887

**CAS Registry No.:** 821794-92-7  
**Formal Name:** 1-[4-amino-7-(3-hydroxypropyl)-5-(4-methylphenyl)-7H-pyrrolo[2,3-d]pyrimidin-6-yl]-2-fluoro-ethanone  
**Synonyms:** Fluoromethyl Ketone, Fluoromethyl Ketone-MEA, FMK-MEA  
**MF:** C<sub>18</sub>H<sub>19</sub>FN<sub>4</sub>O<sub>2</sub>  
**FW:** 342.4  
**Purity:** ≥98%  
**UV/Vis.:** λ<sub>max</sub>: 233, 331 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

FMK is supplied as a crystalline solid. A stock solution may be made by dissolving the FMK in the solvent of choice, which should be purged with an inert gas. FMK is soluble in DMSO.

### Description

FMK is an inhibitor of p90 ribosomal S6 kinase 3α (RSK2; IC<sub>50</sub> = 15 nM).<sup>1</sup> It inhibits the C-terminal domain (CTD) kinase activity of RSK2 and inhibits EGF-induced phosphorylation of RSK2 Ser<sup>386</sup> in serum-starved COS-7 cells (EC<sub>50</sub> = ~200 nM). FMK (6 μM) reduces invasion, but not proliferation, of M4e, 212LN, and 37B human head and neck squamous cell carcinoma cells.<sup>2</sup> It also inhibits FGFR3-induced growth of Ba/F3 cells in a concentration-dependent manner and induces apoptosis in OPM-1, LP-1, and KMS-18 human myeloma cells expressing the t(4;14) translocation mutation and *FGFR3* when used at a concentration of 10 μM.<sup>3</sup>

### References

1. Cohen, M.S., Zhang, C., Shokat, K.M., *et al.* Structural bioinformatics-based design of selective, irreversible kinase inhibitors. *Science* **308**(5726), 1318-1321 (2005).
2. Kang, S., Elf, S., Lythgoe, K., *et al.* p90 ribosomal S6 kinase 2 promotes invasion and metastasis of human head and neck squamous cell carcinoma cells. *J. Clin. Invest.* **120**(4), 1165-1177 (2010).
3. Kang, S., Dong, S., Gu, T.-L., *et al.* FGFR3 activates RSK2 to mediate hematopoietic transformation through tyrosine phosphorylation of RSK2 and activation of the MEK/ERK pathway. *Cancer Cell* **12**(3), 201-214 (2007).

#### 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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