

# PRODUCT INFORMATION



## R406

Item No. 11422

**CAS Registry No.:** 841290-80-0  
**Formal Name:** 6-[[5-fluoro-2-[(3,4,5-trimethoxyphenyl)amino]-4-pyrimidinyl]amino]-2,2-dimethyl-2H-pyrido[3,2-b]-1,4-oxazin-3(4H)-one

**MF:** C<sub>22</sub>H<sub>23</sub>FN<sub>6</sub>O<sub>5</sub>  
**FW:** 470.5

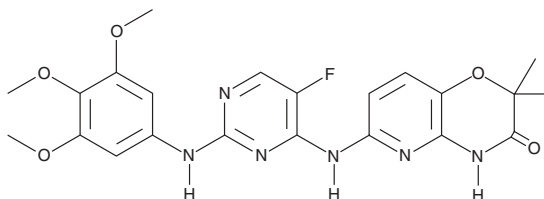
**Purity:** ≥95%

**UV/Vis.:** λ<sub>max</sub>: 220, 278, 336 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

R406 is supplied as a crystalline solid. A stock solution may be made by dissolving the R406 in the solvent of choice, which should be purged with an inert gas. R406 is soluble in organic solvents such as DMSO and dimethyl formamide. The solubility of R406 in these solvents is approximately 0.5 mg/ml.

## Description

R406 is a potent ATP-competitive inhibitor of spleen tyrosine kinase (Syk, K<sub>i</sub> = 30 nM).<sup>1</sup> Through this action, R406 blocks FcεRI-dependent mast cell activation (EC<sub>50</sub> = 43 nM) and, at 3 μM, reduces the release of IL-10, -12, and -13 by immune complex-pulsed dendritic cells.<sup>1,2</sup> R406 is orally available and can reduce immune complex-mediated inflammation.<sup>3</sup> In cancers characterized by over-expression of Syk, R406 can prevent signaling downstream of Syk and induce apoptosis.<sup>4,5</sup> R406 also inhibits Syk-dependent signaling through c-Jun N-terminal kinase in rheumatoid arthritis synoviocytes, suggesting a therapeutic intervention in this autoimmune disease.<sup>6,7</sup>

## References

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2. Matsubara, S., Koya, T., Takeda, K., et al. *Am. J. Respir. Cell Mol. Biol.* **34**(4), 426-433 (2006).
3. Braselmann, S., Taylor, V., Zhao, H., et al. *J. Pharmacol. Exp. Ther.* **319**(3), 998-1008 (2006).
4. Buchner, M., Fuchs, S., Prinz, G., et al. *Cancer Res.* **69**(13), 5424-5432 (2009).
5. Zhang, J., Benavente, C.A., McEvoy, J., et al. *Nature* **481**(7381), 329-334 (2012).
6. Cha, H.-S., Boyle, D.L., Inoue, T., et al. *J. Pharmacol. Exp. Ther.* **317**(2), 571-578 (2006).
7. Singh, R., Masuda, E.S., and Payan, J. *Med. Chem.* **55**(8), 3614-3643 (2012).

### 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.

### WARRANTY AND LIMITATION OF REMEDY

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