

# PRODUCT INFORMATION

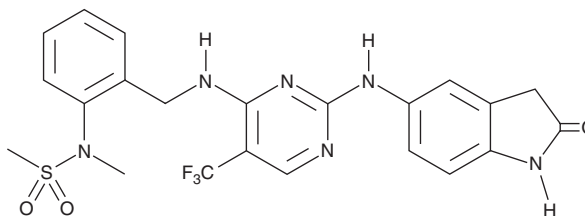


**PF-431396**

Item No. 17665

**CAS Registry No.:** 717906-29-1  
**Formal Name:** N-[2-[[[2-[(2,3-dihydro-2-oxo-1H-indol-5-yl)amino]-5-(trifluoromethyl)-4-pyrimidinyl]amino]methyl]phenyl]-N-methylmethanesulfonamide

**MF:** C<sub>22</sub>H<sub>21</sub>F<sub>3</sub>N<sub>6</sub>O<sub>3</sub>S  
**FW:** 506.5  
**Purity:** ≥98%  
**UV/Vis.:** λ<sub>max</sub>: 236, 286 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

PF-431396 is supplied as a crystalline solid. A stock solution may be made by dissolving the PF-431396 in the solvent of choice, which should be purged with an inert gas. PF-431396 is soluble in organic solvents such as DMSO and dimethyl formamide. The solubility of PF-431396 in these solvents is approximately 15 and 20 mg/ml, respectively.

## Description

Proline-rich tyrosine kinase 2 (PYK2) and focal adhesion kinase (FAK) are nonreceptor tyrosine kinases that constitute the focal adhesion kinase subfamily. PYK2 is expressed in both bone-forming osteoblasts and bone-resorbing osteoclasts where it has a positive role in osteoclast maturation and bone resorption. PF-431396 is a pyrimidine-based dual inhibitor of FAK and PYK2 (IC<sub>50</sub>s = 2 and 11 nM, respectively).<sup>1</sup> In ovariectomized rats, it has been shown to increase bone formation, promoting osteoblast recruitment and activity.<sup>2</sup>

## References

1. Han, S., Mistry, A., Chang, J.S., *et al.* Structural characterization of proline-rich tyrosine kinase 2 (PYK2) reveals a unique (DFG-out) conformation and enables inhibitor design. *J. Biol. Chem.* **284**(19), 13193-13201 (2009).
2. Buckbinder, L., Crawford, D.T., Qi, H., *et al.* Proline-rich tyrosine kinase 2 regulates osteoprogenitor cells and bone formation, and offers an anabolic treatment approach for osteoporosis. *Proc. Natl. Acad. Sci. USA* **104**(25), 10619-10624 (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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