

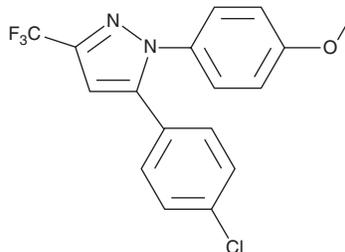
PRODUCT INFORMATION



SC-560

Item No. 70340

CAS Registry No.: 188817-13-2
Formal Name: 5-(4-chlorophenyl)-1-(4-methoxyphenyl)-3-(trifluoromethyl)-1H-pyrazole
MF: C₁₇H₁₂ClF₃N₂O
FW: 352.7
Purity: ≥98%
UV/Vis.: λ_{max}: 232, 251 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

SC-560 is supplied as a crystalline solid. A stock solution may be made by dissolving the SC-560 in the solvent of choice. SC-560 is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF), which should be purged with an inert gas. The solubility of SC-560 in these solvents is approximately 22, 24, and 150 mg/ml, respectively.

SC-560 is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, SC-560 should first be dissolved in DMF and then diluted with the aqueous buffer of choice. SC-560 has a solubility of approximately 1.2 mg/ml in a 1:1 solution of DMF:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

SC-560 is a member of the diaryl heterocycle class of cyclooxygenase (COX) inhibitors which includes celecoxib (Celebrex™) and rofecoxib (Vioxx™). However, unlike these selective COX-2 inhibitors, SC-560 is a selective inhibitor of COX-1. Using human recombinant enzymes, the IC₅₀ value for SC-560 with respect to COX-1 is 9 nM, while the corresponding IC₅₀ value for COX-2 is 6.3 μM.¹ Thus, SC-560 shows 700-fold selectivity for the COX-1 enzyme. SC-560 is orally active in the rat, where 10 mg/kg completely abolishes the ionophore-induced production of thromboxane B₂ in whole blood. However, SC-560 is ineffective in the treatment of inflammation in models, such as the LPS-induced rat air-pouch model, in which COX-2-generated prostaglandins play a significant role in the inflammatory process.² In whole cells, however, SC-560 appears to act as a non-selective COX inhibitor.³ The mechanism of the selective versus non-selective effects of SC-560 in a cell-free environment compared whole cells has not been elucidated.

References

1. Smith, C.J., Zhang, Y., Koboldt, C.M., *et al.* Pharmacological analysis of cyclooxygenase-1 in inflammation. *Proc. Natl. Acad. Sci. USA* **95**, 13313-13318 (1998).
2. Masferrer, J.L., Zweifel, B.S., Manning, P.T., *et al.* Selective inhibition of inducible cyclooxygenase 2 *in vivo* is antiinflammatory and nonulcerogenic. *Proc. Natl. Acad. Sci. USA* **91**, 3228-3232 (1994).
3. Brenneis, C., Maier, T.J., Schmidt, R., *et al.* Inhibition of prostaglandin E₂ synthesis by SC-560 is independent of cyclooxygenase 1 inhibition. *FASEB J.* **20**, 1352-1360 (2006).

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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