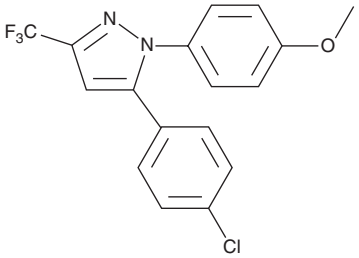
PRODUCT INFORMATION

SC-560

Item No. 70340

CAS Registry No.: 188817-13-2
Formal Name: 5-(4-chlorophenyl)-1-(4-methoxyphenyl)-3-(trifluoromethyl)-1H-pyrazole
MF: $C_{17}H_{12}ClF_3N_2O$
FW: 352.7
Purity: ≥98%
UV/Vis.: λ_{max}: 232, 251 nm
Supplied as: A crystalline solid
Storage: -20°C
Stability: ≥2 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 cyclooxygesnase (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 IC_{50} value for SC-560 with respect to COX-1 is 9 nM, while the corresponding IC_{50} 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 B_2 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 E_2 synthesis by SC-560 is independent of cyclooxygenase 1 inhibition. *FASEB J.* **20**, 1352-1360 (2006).

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