

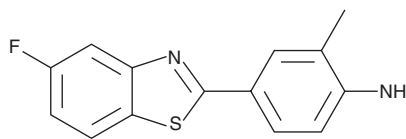
PRODUCT INFORMATION



5-fluoro 203

Item No. 17677

CAS Registry No.: 260443-89-8
Formal Name: 4-(5-fluoro-2-benzothiazolyl)-2-methyl-benzenamine
Synonym: NSC 703786
MF: C₁₄H₁₁FN₂S
FW: 258.3
Purity: ≥98%
UV/Vis.: λ_{max}: 204, 219, 351 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

5-fluoro 203 is supplied as a crystalline solid. A stock solution may be made by dissolving the 5-fluoro 203 in the solvent of choice, which should be purged with an inert gas. 5-fluoro 203 is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of 5-fluoro 203 in ethanol is approximately 2 mg/ml and approximately 30 mg/ml in DMSO and DMF.

Description

The aryl hydrocarbon receptor (AhR) is a ligand-activated transcription factor that promotes the expression of phase I and II xenobiotic chemical metabolizing enzyme genes, including the cytochrome P450 (CYP) isoforms CYP1A1 and CYP1A2. 5-fluoro 203 is a cytotoxic compound that at 1 μM activates AhR signaling, inducing transcription of CYP1A1, which leads to the formation of DNA adducts and cell cycle arrest.¹⁻³ In certain ovarian, breast, kidney, and colorectal cancer cells, 5-fluoro 203 can increase the levels of reactive oxygen species as well as activate JNK, ERK, and p38 MAPK.⁴

References

1. Brantley, E., Patel, V., Stinson, S.F., *et al.* The antitumor drug candidate 2-(4-amino-3-methylphenyl)-5-fluorobenzothiazole induces NF-κB activity in drug-sensitive MCF-7 cells. *Anticancer Drugs* **16**(2), 137-143 (2005).
2. Hose, C.D., Hollingshead, M., Sausville, E.A., *et al.* Induction of CYP1A1 in tumor cells by the antitumor agent 2-[4-amino-3-methylphenyl]-5-fluoro-benzothiazole: A potential surrogate marker for patient sensitivity. *Mol. Cancer Ther.* **2**(12), 1265-1272 (2003).
3. Bruno, R.D. and Njar, V.C.O. Targeting cytochrome P450 enzymes: A new approach in anti-cancer drug development. *Bioorg. Med. Chem.* **15**(15), 5047-5060 (2007).
4. Callero, M.A., Luzzani, G.A., De Dios, D.O., *et al.* Biomarkers of sensitivity to potent and selective antitumor 2-(4-amino-3-methylphenyl)-5-fluorobenzothiazole (5F203) in ovarian cancer. *J. Cell. Biochem.* **114**(10), 2392-2404 (2013).

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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