DuP-697
Item No. 70645

CAS Registry No.: 88149-94-4
Formal Name: 5-bromo-2-(4-fluorophenyl)-3-(4-(methylsulfonyl)phenyl)-thiophene
MF: C_{17}H_{12}BrFO_{2}S_{2}
FW: 411.3
Purity: ≥98%
Stability: ≥1 year at -20°C
Supplied as: A crystalline solid
UV/Vis.: λ_{max} = 254, 300 nm

Laboratory Procedures

For long term storage, we suggest that DuP-697 be stored as supplied at -20°C. It should be stable for at least one year.

DuP-697 is supplied as a crystalline solid. A stock solution may be made by dissolving the DuP-697 in an organic solvent purged with an inert gas. DuP-697 is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of DuP-697 in these solvents is approximately 7, 15, and 54 mg/ml, respectively.

DuP-697 is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, DuP-697 should first be dissolved in DMF and then diluted with the aqueous buffer of choice. DuP-697 has a solubility of approximately 0.5 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

DuP-697 is a member of the diaryl heterocycle group of selective COX-2 inhibitors which includes MK-966 (rofecoxib), SC-58125, and celecoxib. DuP-697 is a potent and time-dependent inhibitor of COX-2. When tested on isolated recombinant enzymes, DuP-697 is at least 50 times more potent in the inhibition of COX-2 than COX-1. The IC_{50} values for human recombinant COX-2 are 80 and 40 nM at 5 and 10 minutes, respectively. The IC_{50} for the inhibition of human recombinant COX-1 after the same time intervals is 9 μM. DuP-697 also attenuates the COX-1 inhibitory activity of non-selective COX inhibitors such as indomethacin.

References