

Functionalized Spirocyclic Heterocycle Synthesis and Cytotoxicity Assay

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Materials

Name	Company	Catalog Number	Comments
CELLS			
COS-7 cells (ATCC CRL-1651)	ATCC	CRL-1651	African green monkey kidney cells
CHEMICALS			
1-Bromooctane	Sigma-Aldrich	152951	Alkyl-halide
Allylbromide	Sigma-Aldrich	337528	Alkyl-halide
Benzylbromide	Sigma-Aldrich	B17905	Alkyl-halide
Cisplatin	Cayman Chemical	13119	Cytotoxicity control
Dichloromethane (DCM)	Sigma-Aldrich	270997	Solvent
Dimethylformamide (DMF)	Sigma-Aldrich	227056	Solvent
Dimethylsulfoxide (DMSO)	Sigma-Aldrich	276855	Solvent
DMEM, high glucose, with L-glutamine	Genesee Scientific	25-500	Cell culture media
FBS (Fetal bovine serum)	Sigma-Aldrich	F4135	Cell culture media
Furfurylamine	Acros Organics	119800050	reagent
Iodomethane	Sigma-Aldrich	289566	Alkyl-halide
Methanol	Sigma-Aldrich	34860	Solvent
MTT ((3-(4,5-Dimethylthiazol-2-yl)-2,5-Diphenyltetrazolium Bromide)	EMD Millipore	Calbiochem 475989-1GM	Reagent
Phosphate-buffered Saline (PBS)	Genesee Scientific	25-507	Cell culture media
REM Resin	Nova Biochem	8551010005	Polymer support; 0.500 mmol/g loading
<i>trans</i> - β -nitrostyrene	Sigma-Aldrich	N26806	Nitro-olefin reagent
Toluene	Sigma-Aldrich	244511	Solvent
Triethylamine (TEA)	Sigma-Aldrich	T0886	Reagent for beta-elimination
Trimethylsilyl chloride (TMSCl)	Sigma-Aldrich	386529	Reagent; CAUTION - highly volatile; creates HCl gas
GLASSWARE/INSTRUMENTATION			
25 mL solid-phase reaction vessel	Chemglass	CG-1861-02	Glassware with filter
96 Well plate reader	Promega (Turner Biosystems)	9310-011	Instrument

AVANCE III NMR Spectrometer	Bruker	N/A	Instrument; 300 MHz; Solvents: CDCl ₃ and CD ₃ OH
Thermo Scientific Nicole iS5	Thermo Scientific	IQLAADGAAGFAHDMAZA	Instrument
Wrist-Action Shaker	Burrell Scientific	757950819	Instrument