Temozolomide

Item No. 14163

CAS Registry No.: 85622-93-1
Formal Name: 3,4-dihydro-3-methyl-4-oxo-imidazo[5,1-d]-1,2,3,5-tetrazine-8-carboxamide
Synonyms: CCRG 81045, MB 39831, Methazolastone, NSC 362856, Temodal, TMZ
MF: C_{6}H_{7}N_{6}O_{2}
FW: 194.2
Purity: ≥98%
UV/Vis.: λ_{max}: 209, 254, 327 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

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

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. Organic solvent-free aqueous solutions of TMZ can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of TMZ in PBS, pH 7.2, is approximately 0.33 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

Temozolomide (TMZ) is an imidazotetrazine that is converted to a compound capable of alkylating DNA, thus interfering with DNA replication and leading to cytotoxicity in proliferating cells. TMZ is rapidly and completely absorbed from the gastrointestinal tract after oral administration and readily crosses the blood-brain barrier. It is effective in a variety of types of cancer, including aggressive brain cancers.

References