Remdesivir is supplied as a crystalline solid. A stock solution may be made by dissolving the remdesivir in the solvent of choice, which should be purged with an inert gas. Remdesivir is soluble in the organic solvent DMSO.

Description

Remdesivir is a prodrug form of the antiviral nucleoside analog GS-441524 (Item No. 30469). Upon entry into cells, remdesivir is metabolized into a nucleoside monophosphate form, which is further metabolized to an active nucleoside triphosphate that induces RNA chain termination and inhibits viral polymerases. Remdesivir reduces viral titers in primary human airway epithelial (HAE) cells infected with Middle East respiratory syndrome coronavirus (MERS-CoV) or severe acute respiratory syndrome CoV (SARS-CoV; EC\textsubscript{50} = 0.074 and 0.069 µM, respectively). It reduces infectious virus production in SARS-CoV-2-infected HAE cells (EC\textsubscript{50} = 10 nM). In vivo, remdesivir (25 and 50 mg/kg) reduces lung viral titers and prevents weight loss in a mouse model of SARS-CoV infection. Remdesivir (25 mg/kg) also reduces lung viral titers and lung hemorrhage and improves pulmonary function in mice infected with a chimeric SARS-CoV encoding the SARS-CoV-2 RNA-dependent RNA polymerase (RdRp). Formulations containing remdesivir have been used in the treatment of COVID-19.

References