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Pelareorep

National Cancer Institute

Source

National Cancer Institute. *Pelareorep*. NCI Thesaurus. Code C60774.

An isolate of the oncolytic, human wild-type serotype 3 Dearing (T3D) strain of the double-stranded RNA virus reovirus (Respiratory Enteric Orphan virus), with potential oncolytic activity. Upon administration, pelareorep is able to replicate specifically in cancer cells bearing an activated Ras pathway. This induces apoptosis in Ras-activated tumor cells and subsequently frees progeny viral particles to infect, replicate in and induce cell death of surrounding cancer cells. In addition, viral replication causes the activation of innate and adaptive immune responses, causing a natural killer (NK)-cell-mediated and a cytotoxic T-cell (CTL)-mediated killing of tumor cells, respectively. Ras-activated tumor cells are deficient in their ability to trigger the antiviral response mediated by the host cellular protein, double-stranded RNA-dependent protein kinase (PKR).