Product Data Sheet

Chemical Properties

Product Name: Resazurin sodium salt
Cas No.: 62758-13-8
M.Wt: 251.17
Formula: C12H6NNaO4

Chemical Name: sodium 7-oxido-3-oxo-3H-phenoxazine 10-oxide
Canonical SMILES: O=C1C=C2OC3=CC([O-])=CC=C3[N+][O-])=C2C=C1.[Na+]
Solubility: Soluble in DMSO
Storage: Store at -20°C
General tips: For obtaining a higher solubility, please warm the tube at 37°C and shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.
Shopping Condition: Evaluation sample solution: ship with blue ice

Biological Activity

Targets: Others
Pathways: Others
Description:
The non-fluorescent resazurin has been used as a fluorogenic oxidation-reduction indicator in various cells by flow cytometry, fluorescence microscopy and high-throughput screening. Its red-fluorescent product, resorufin, has absorption/emission maxima ~575/585 nm.
In vitro: Resazurin has been applied as a simple and versatile way to measure cell proliferation and cytotoxicity. Although resazurin presented plenty of advantages over other cytotoxicity or proliferation tests, several drawbacks to the routine use of resazurin were also observed. Previous studies showed accumulation of the fluorescent product of resazurin in the medium which could
result in an overestimation of cell population. Moreover, the extensive reduction of resazurin by metabolically active cells would lead to a final nonfluorescent product, and thus an underestimation of cellular activity [1]. In order to evaluate the effect of resazurin over longer incubation times, MCF7, MCF10A, 3T3-L1 and D1 cell lines were tested. Results showed that MCF7, 3T3-L1, and D1 cells cultured for 8 days with 20% resazurin had significantly less cell survivability. Moreover, levels of metabolic activity, DNA concentration, as well as glucose consumption of the cell lines in medium with 20% resazurin were significantly lower. Data also showed that the toxicities were more pronounced in the cancer cell lines than in the noncancerous cells [2].

Reference: