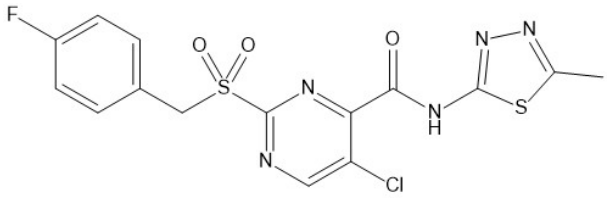
Tribioscience

PK11007, Reactivator of mutant p53

Catalog	Unit
TBI4176-5MG	5 mg
TBI4176-25MG	25 mg

Product Details

Formal Name: 5-Chloro-2-[(4-fluorophenyl)methylsulfonyl]-N-(5-methyl-1,3,4-thiadiazol-2-yl)pyrimidine-4-carboxamide
Molecular Formula: $C_{15}H_{11}ClFN_5O_3S_2$
Formula Weight: 427.8
CAS Number: 874146-69-7
Purity: >98%
Formulation: Powder
Solubility: Soluble in DMSO (> 25 mg/ml)
Storage: -20°C
Stability: ≥ 2 years.



Applications

Reactivator of mutant p53

Functions

Reactivates mutant p53 via selective alkylation of two cysteine residues without compromising DNA-binding ability. p53 target genes p21 and PUMA were activated by treatment with PK11007. Mutant p53-containing cancer cells were more sensitive to PK11007 than wild-type with mutant cells showing greatly reduced viability. It also generated high levels of reactive oxygen species and induced ER stress in a p53-independent (and dependent on glutathione depletion) manner that resulted in cell death. Inhibited cellular proliferation, induced apoptosis, and blocked cell migration in a panel of 17 breast cancer lines including triple-negative breast cancer (IC50s: 2.3 to 42.2 μM).

Application Procedures

First dissolved in Soluble in DMSO (> 25 mg/ml), then diluted to aqueous buffer. Solutions in DMSO may be stored at -20°C for up to 3 months.

For research use only.