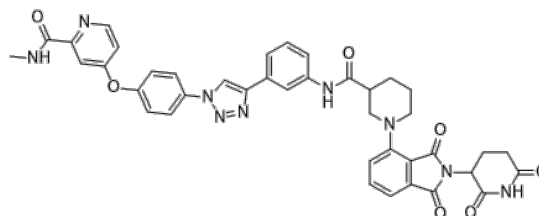


Product Name : SMART1
Cat. No. : PC-22749
CAS No. : 3070172-53-8
Molecular Formula : C₄₀H₃₅N₉O₇
Molecular Weight : 753.78
Target : PROTAC
Solubility : 10 mM in DMSO



Biological Activity

SMART1 (Smurf1 PROTAC degrader) is a potent, highly selective degrader of E3 ligase SMAD ubiquitylation regulatory factor 1 (**Smurf1**) with DC50 of 1-5 nM in HT29 and PANC-1 cells, Dmax of 86%.

SMART1 binds to the HECT domain of Smurf1 but not Smurf2, with KD value of 500 nM.

SMART1 inhibits tumor growth in KRAS mutant CRC cells, including HCT116, LOVO, SW620, CFPAC-1 and Mia-PaCa-2, with IC50 of 10-50 nM, robustly inhibits PDK1 K163 neddylation, Akt T308 phosphorylation.

SMART1 could not induce Smurf1 degradation in CRBN-depleted cells, Smurf1 or PDK1 knockdown significantly reduces the sensitivity of CRC cells to SMART1.

SMART1 (50 and 100 mg/kg, daily dosing for 2 weeks) inhibits tumor growth and Akt phosphorylation in preclinical models of KRAS mutant CRC and synergizes with PDK1 inhibitor AR12 (OSU-03012).

References

Peng Z, et al. *Nat Chem Biol*. 2024 Jul 22. doi: 10.1038/s41589-024-01683-5.

Caution: Product has not been fully validated for medical applications. Lab Use Only!

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