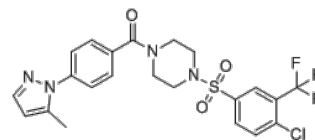


**Product Name** : Smurf1 inhibitor A01  
**Cat. No.** : PC-21766  
**CAS No.** : 1007647-73-5  
**Molecular Formula** : C<sub>22</sub>H<sub>20</sub>ClF<sub>3</sub>N<sub>4</sub>O<sub>3</sub>S  
**Molecular Weight** : 512.93  
**Target** : E3 Ubiquitin Ligase  
**Solubility** : 10 mM in DMSO



## Biological Activity

Smurf1 inhibitor A01 is a specific small molecule inhibitor of ubiquitin ligase Smad ubiquitination regulatory factor-1 (**Smurf1**) with K<sub>d</sub> of 3.66 nM for interrupting Smurf1-Smad1 interaction, impairs Smurf1-mediated Smad1/5 degradation and stabilizes Smad1/5 protein level.

Smurf1 inhibitor A01 does not affect the protein level of Smad2/3, Smad4, ING2 and the small guanosine triphosphatase RhoA.

Smurf1 inhibitor A01 does not interrupt Smurf2-Smad2 or Smurf2-Smad3 interactions.

Smurf1 inhibitor A01 (2 μM) enhances BMP signaling responsiveness in C2C12 and mouse pre-osteoblasts MC3T3-E1 cells, induces gene expression of ALP, osteocalcin and type I collagen (α1).

Smurf1 inhibitor A01 (10 μM) potentiates BMP-2 induced osteoblastic activity in both C2C12 and MC3T3-E1 cells, potentiates BMP-2 induced ALP enrichment.

## References

Yu Cao, et al. *Sci Rep.* 2014 May 14;4:4965.

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

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