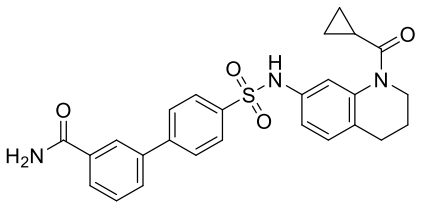
Product data sheet

MedKoo Cat#: 463689 Name: SU0268 CAS#: 2210228-45-6 Chemical Formula: $C_{26}H_{25}N_3O_4S$ Exact Mass: 475.1566 Molecular Weight: 475.56	
Product supplied as:	Powder
Purity (by HPLC):	≥ 98%
Shipping conditions	Ambient temperature
Storage conditions:	Powder: -20°C 3 years; 4°C 2 years.
	In solvent: -80°C 3 months; -20°C 2 weeks.

1. Product description:
SU0268 is a potent and selective OGG1 inhibitor. DNA glycosylases involved in the first step of the DNA base excision repair pathway are promising targets in cancer therapy. There is evidence that reduction of their activities may enhance cell killing in malignant tumors.

2. CoA, QC data, SDS, and handling instruction
SDS and handling instruction, CoA with copies of QC data (NMR, HPLC and MS analytical spectra) can be downloaded from the product web page under "QC And Documents" section. Note: copies of analytical spectra may not be available if the product is being supplied by MedKoo partners. Whether the product was made by MedKoo or provided by its partners, the quality is 100% guaranteed.

3. Solubility data

Solvent	Max Conc. mg/mL	Max Conc. mM
DMF	10	21.03
DMSO	10	21.03
Ethanol	15	31.54

4. Stock solution preparation table:

Concentration / Solvent Volume / Mass	1 mg	5 mg	10 mg
1 mM	2.10 mL	10.51 mL	21.03 mL
5 mM	0.42 mL	2.10 mL	4.21 mL
10 mM	0.21 mL	1.05 mL	2.10 mL
50 mM	0.04 mL	0.21 mL	0.42 mL

5. Molarity Calculator, Reconstitution Calculator, Dilution Calculator
Please refer the product web page under section of "Calculator"

6. Recommended literature which reported protocols for in vitro and in vivo study
In vitro study

1. Tanushi X, Pinna G, Vandamme M, Siberchicot C, D'Augustin O, Di Guilmi AM, Radicella JP, Castaing B, Smith R, Huet S, Leteurtre F, Campalans A. OGG1 competitive inhibitors show important off-target effects by directly inhibiting efflux pumps and disturbing mitotic progression. Front Cell Dev Biol. 2023 Feb 3;11:1124960. doi: 10.3389/fcell.2023.1124960. PMID: 36819096; PMCID: PMC9936318.
2. Tahara YK, Auld D, Ji D, Beharry AA, Kietrys AM, Wilson DL, Jimenez M, King D, Nguyen Z, Kool ET. Potent and Selective Inhibitors of 8-Oxoguanine DNA Glycosylase. J Am Chem Soc. 2018 Feb 14;140(6):2105-2114. doi: 10.1021/jacs.7b09316. Epub 2018 Feb 5. PMID: 29376367; PMCID: PMC5823510.

In vivo study

1. Qin S, Lin P, Wu Q, Pu Q, Zhou C, Wang B, Gao P, Wang Z, Gao A, Overby M, Yang J, Jiang J, Wilson DL, Tahara YK, Kool ET, Xia Z, Wu M. Small-Molecule Inhibitor of 8-Oxoguanine DNA Glycosylase 1 Regulates Inflammatory Responses during Pseudomonas aeruginosa Infection. J Immunol. 2020 Oct 15;205(8):2231-2242. doi: 10.4049/jimmunol.1901533. Epub 2020 Sep 14. PMID: 32929043; PMCID: PMC7541742.

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7. Bioactivity

Biological target:

SU0268 is an inhibitor of 8-oxoguanine DNA glycosylase 1 (OGG1; IC50 = 0.059 μM).

In vitro activity

SU0268 is a potentially useful tool in studies of the role of OGG1 in multiple disease-related pathways. SU0268 was confirmed to bind OGG1 both in the absence and in the presence of DNA. SU0268 was selective for inhibiting OGG1 over multiple repair enzymes, including other base excision repair enzymes, and displayed no toxicity in two human cell lines at 10 μM. SU0268 inhibited OGG1 in HeLa cells, resulting in an increase in accumulation of 8-OG in DNA.

Reference: J Am Chem Soc. 2018 Feb 14;140(6):2105-2114. https://pubmed.ncbi.nlm.nih.gov/29376367/

In vivo activity

SU0268 has potential as an alternative treatment for controlling severe inflammatory responses to bacterial infection. SU0268 had a favorable effect on bacterial infection in C57BL/6 wild-type mice by suppressing inflammatory responses, particularly promoting type I IFN responses. SU0268 inhibited proinflammatory responses during Pseudomonas aeruginosa infection and induced the release of type I IFN by the mitochondrial DNA-cGAS-STING-IRF3-IFN-β axis, decreasing bacterial loads and halts disease progression.

Reference: J Immunol. 2020 Oct 15;205(8):2231-2242. https://pubmed.ncbi.nlm.nih.gov/32929043/

Note: The information listed here was extracted from literature. MedKoo has not independently retested and confirmed the accuracy of these methods. Customer should use it just for a reference only.