

Product data sheet



MedKoo Cat#: 406744 Name: PD1-PDL1 inhibitor 1 (PD1-PDL1-IN1) CAS#: 1675201-83-8 Chemical Formula: C ₂₉ H ₃₃ NO ₅ Exact Mass: 475.2359 Molecular Weight: 475.59		
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:

PD1-PDL1 inhibitor 1, also known as PD1-PDL1-IN1, is an inhibitor of the PD-1 /PD-L1 protein/protein interaction. PD1-PDL1 inhibitor is an immunomodulator. Programmed death-ligand 1 (PD-L1) also known as cluster of differentiation 274 (CD274) or B7 homolog 1 (B7-H1) is a protein that in humans is encoded by the CD274 gene. It appears that upregulation of PD-L1 may allow cancers to evade the host immune system.

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
DMSO	10.0	21.0

4. Stock solution preparation table:

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

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. Sabatier R, Finetti P, Mamessier E, Adelaide J, Chaffanet M, Ali HR, Viens P, Caldas C, Birnbaum D, Bertucci F. Prognostic and predictive value of PDL1 expression in breast cancer. *Oncotarget*. 2015 Mar 10;6(7):5449-64. doi: 10.18632/oncotarget.3216. PMID: 25669979; PMCID: PMC4467160.
2. Filippova N, Yang X, An Z, Nabors LB, Pereboeva L. Blocking PD1/PDL1 Interactions Together with MLN4924 Therapy is a Potential Strategy for Glioma Treatment. *J Cancer Sci Ther*. 2018;10(8):190-197. doi: 10.4172/1948-5956.1000543. Epub 2018 Aug 6. PMID: 30393513; PMCID: PMC6214201.

In vivo study

TBD

7. Bioactivity

Biological target:

PD1-PDL1 is an inhibitor of the PD-1/PD-L1 protein/protein interaction (IC₅₀ between 6 and 100 nM).

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In vitro activity

Recently PD1/PDL1-inhibitors have shown promising results in different carcinomas with correlation between PDL1 tumor expression and responses. PDL1 mRNA expression was retrospectively analyzed in 45 breast cancer cell lines and 5,454 breast cancers profiled using DNA microarrays. Luminal cell lines (N=16) showed lower PDL1 expression level than basal cell lines (N=11; $p=1.46E-03$, Tukey test) and mesenchymal cell lines (N=8; $p=2.0E-04$, Tukey test). PDL1 expression was similar between basal and mesenchymal cell lines ($p=0.34$, Turkey test; Figure 11 and Supplementary Figure 1). PDL1 expression was analyzed in 5,454 clinical breast cancer samples pooled from 18 data sets (Supplementary Tables 2-3): 1076 tumors (20%) showed PDL1 upregulation when compared to normal breast (ratio T/NB ≥ 2 ; "PDL1-up" group), and 4378 (80%) did not show upregulation (ratio < 2 ; "PDL1-no up" group). The study, together with the known link between PDL1 expression and tumor response to PDL1-inhibitors, suggests that the therapeutic targeting of PDL1 in basal breast cancers could enhance the local immune response, thus providing an antitumor effect and decreasing the metastatic risk and improving the therapeutic response when associated with immunogenic anticancer chemotherapy such as doxorubicin.

Reference: Oncotarget. 2015 Mar 10; 6(7): 5449–5464. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4467160/>

In vivo activity

TBD

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.