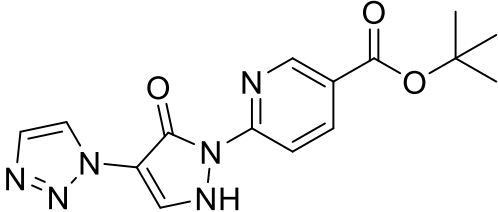


Product data sheet



MedKoo Cat#: 530994 Name: IOX4 CAS: 1154097-71-8 Chemical Formula: C ₁₅ H ₁₆ N ₆ O ₃ Exact Mass: 328.1284 Molecular Weight: 328.332	
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:

IOX4 is a potent inhibitor of PHD2 (IC₅₀ = 1.6 nM). IOX4 induces HIF α in cells and in wildtype mice with marked induction in the brain tissue, revealing that it is useful for studies aimed at validating the upregulation of HIF for treatment of cerebral diseases including stroke.

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	25.0	76.14
DMF:PBS (pH 7.2) (1:1)	0.5	1.52
DMSO	45.33	138.07
Ethanol	2.0	6.09

4. Stock solution preparation table:

Concentration / Solvent Volume / Mass	1 mg	5 mg	10 mg
1 mM	3.05 mL	15.23 mL	30.46 mL
5 mM	0.61 mL	3.05 mL	6.09 mL
10 mM	0.30 mL	1.52 mL	3.05 mL
50 mM	0.30 mL	1.52 mL	3.05 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. Chan MC, Atasoylu O, Hodson E, Tumber A, Leung IK, Chowdhury R, Gómez-Pérez V, Demetriades M, Rydzik AM, Holt-Martyn J, Tian YM, Bishop T, Claridge TD, Kawamura A, Pugh CW, Ratcliffe PJ, Schofield CJ. Potent and Selective Triazole-Based Inhibitors of the Hypoxia-Inducible Factor Prolyl-Hydroxylases with Activity in the Murine Brain. PLoS One. 2015 Jul 6;10(7):e0132004. doi: 10.1371/journal.pone.0132004. PMID: 26147748; PMCID: PMC4492579.

In vivo study

1. Chan MC, Atasoylu O, Hodson E, Tumber A, Leung IK, Chowdhury R, Gómez-Pérez V, Demetriades M, Rydzik AM, Holt-Martyn J, Tian YM, Bishop T, Claridge TD, Kawamura A, Pugh CW, Ratcliffe PJ, Schofield CJ. Potent and Selective Triazole-Based Inhibitors of the Hypoxia-Inducible Factor Prolyl-Hydroxylases with Activity in the Murine Brain. PLoS One. 2015 Jul 6;10(7):e0132004. doi: 10.1371/journal.pone.0132004. PMID: 26147748; PMCID: PMC4492579.

7. Bioactivity

Product data sheet



Biological target:

IOX4 is a selective HIF prolyl-hydroxylase 2 (PHD2) inhibitor with an IC_{50} value of 1.6 nM, induces HIF α in cells and in wildtype mice with marked induction in the brain tissue. IOX4 competes with and displaces 2-oxoglutarate (2OG) at the active site of PHD2.

In vitro activity

Induction of HIF1 α levels were observed in MCF-7, Hep3B and U2OS cells treated with IOX2 and IOX4, with IOX4 apparently being markedly more potent than IOX2 (Fig 3D–3F). These cellular results are consistent with the *in vitro* data indicating that IOX4 is a substantially more potent PHD inhibitor than IOX2.

Reference: PLoS One. 2015 Jul 6;10(7):e0132004. <https://pubmed.ncbi.nlm.nih.gov/26147748/>

In vivo activity

Dose-dependent induction of both HIF1 α and HIF2 α in the liver and brain was observed after IOX4 treatment (Fig 4B and 4C). These observations reveal both IOX2 and IOX4 as active PHD inhibitors in mice; however, induction of HIF1 α and HIF2 α protein levels in the brain were only observed with IOX4.

Reference: PLoS One. 2015 Jul 6;10(7):e0132004. <https://pubmed.ncbi.nlm.nih.gov/26147748/>

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.