

Product data sheet



MedKoo Cat#: 556064 Name: IXA4 CAS#: 1185329-96-7 Chemical Formula: C ₂₄ H ₂₈ N ₄ O ₄ Exact Mass: 436.2111 Molecular Weight: 436.512	
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:

IXA4 is a highly selective, non-toxic IRE1/XBP1s activator. IXA4 transiently activates protective IRE1/XBP1s signaling in liver without inducing RIDD or TRAF2/JNK signaling. IXA4 treatment improves systemic glucose metabolism and liver insulin action through IRE1-dependent remodeling of the hepatic transcriptome that reduces glucose production and steatosis. IXA4-stimulated IRE1 activation also enhances pancreatic function. Our findings indicate that systemic, transient activation of IRE1/XBP1s signaling engenders multi-tissue benefits that integrate to mitigate obesity-driven metabolic dysfunction.

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	93.5	214.20 mL
Ethanol	11.0	25.20 mL

4. Stock solution preparation table:

Concentration / Solvent Volume / Mass	1 mg	5 mg	10 mg
1 mM	2.29 mL	11.45 mL	22.91 mL
5 mM	0.46 mL	2.29 mL	4.58 mL
10 mM	0.23 mL	1.15 mL	2.29 mL
50 mM	0.05 mL	0.23 mL	0.46 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. Grandjean JMD, Madhavan A, Cech L, Seguinot BO, Paxman RJ, Smith E, Scampavia L, Powers ET, Cooley CB, Plate L, Spicer TP, Kelly JW, Wiseman RL. Pharmacologic IRE1/XBP1s activation confers targeted ER proteostasis reprogramming. *Nat Chem Biol.* 2020 Oct;16(10):1052-1061. doi: 10.1038/s41589-020-0584-z. Epub 2020 Jul 20. PMID: 32690944; PMCID: PMC7502540.

In vivo study

N/A

7. Bioactivity

Biological target:

IXA4 is a highly selective, non-toxic IRE1/XBP1s activator. IXA4 (10 μM; 4 hours) selectively upregulates XBP1s mRNA, relative to genes regulated by ATF6 (e.g., BiP) or PERK (e.g., CHOP), in other cell lines including Huh7 and SHSY5Y cells.

In vitro activity

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IXA4 reduced A β levels 50% in conditioned media prepared on CHO^{7PA2} cells expressing the V717F APP (APP^{V717F}) mutant (Fig. 5B). This study confirmed compound-dependent IRE1/XBP1s activation in these cells by qPCR (Extended Data Fig. 7C).

Reference: Nat Chem Biol. 2020 Oct;16(10):1052-1061. <https://pubmed.ncbi.nlm.nih.gov/32690944/>

In vivo activity

N/A

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.