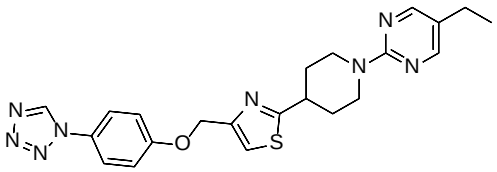
Product data sheet

MedKoo Cat#: 501203 Name: MBX-2982 CAS: 1037792-44-1 Chemical Formula: $C_{22}H_{24}N_8OS$ Exact Mass: 448.1794 Molecular Weight: 448.5440	
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:
MBX-2982, also known as SAR-260093, is a potential first-in-class treatment for type 2 diabetes that targets G protein-coupled receptor 119 (GPR119), a receptor that interacts with bioactive lipids known to stimulate glucose-dependent insulin secretion. Preclinical data indicate that MBX-2982 is a potent selective orally-active GPR119 agonist that functions through a unique dual mechanism of action. First, it acts directly on the beta cell to increase insulin secretion. In addition, MBX-2982 stimulates release of the incretin GLP-1 from the gut. This dual action is unique and may offer improved glucose homeostasis over existing diabetes therapies, with potential for weight loss and improved islet health.

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	50.0	111.47

4. Stock solution preparation table:

Concentration / Solvent Volume / Mass	1 mg	5 mg	10 mg
1 mM	2.23 mL	11.15 mL	22.29 mL
5 mM	0.45 mL	2.23 mL	4.46 mL
10 mM	0.22 mL	1.11 mL	2.23 mL
50 mM	0.05 mL	0.22 mL	0.45 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. Spasov AA, Kosolapov VA, Babkov DA, Maika OY. Effect of GRP119 Receptor Agonist, Compound MBX-2982, on Activity of Human Glucokinase. Bull Exp Biol Med. 2017 Sep;163(5):695-698. doi: 10.1007/s10517-017-3881-0. Epub 2017 Sep 25. PMID: 28944428.

In vivo study

1. Yang JW, Kim HS, Im JH, Kim JW, Jun DW, Lim SC, Lee K, Choi JM, Kim SK, Kang KW. GPR119: a promising target for nonalcoholic fatty liver disease. FASEB J. 2016 Jan;30(1):324-35. doi: 10.1096/fj.15-273771. Epub 2015 Sep 23. PMID: 26399788.

7. Bioactivity
Biological target:

MBX-2982 is a selective, orally-available G protein-coupled receptor 119 (GPR119) agonist.

In vitro activity

Product data sheet

The advantage of NAD coenzyme vs. thio-NAD is proven. Manifest activation of glucokinase by MBX-2982 compound (GPR119 agonist) in a wide range of concentrations is demonstrated experimentally.

Reference: Bull Exp Biol Med. 2017 Sep;163(5):695-698. https://pubmed.ncbi.nlm.nih.gov/28944428/

In vivo activity

Oral administration of MBX (MBX-2982) in mice fed a high-fat diet potently inhibited hepatic lipid accumulation and expression levels of SREBP-1 and lipogenesis-related genes, whereas the hepatic antilipogenesis effects of MBX were abolished in GPR119 KO mice. MBX activated AMPK and increased Ser-372 phosphorylation of SREBP-1c, an inhibitory form of SREBP-1c. Moreover, inhibition of AMPK recovered MBX-induced down-regulation of SREBP-1.

Reference: FASEB J. 2016 Jan;30(1):324-35. https://pubmed.ncbi.nlm.nih.gov/26399788/

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.