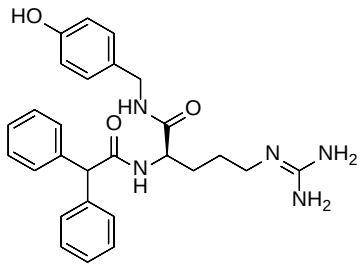
Product data sheet

MedKoo Cat#: 531551 Name: BIBP3226 CAS#: 159013-54-4 Chemical Formula: $C_{27}H_{31}N_5O_3$ Exact Mass: 473.2427 Molecular Weight: 473.58	
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:

BIBP3226 is a nonpeptide antagonist of neuropeptide Y (NPY) receptor Y1 (Ki = 1.1 nM).1 It is selective for Y1 over Y2, Y4, and Y5 receptors (Kis = >1,000 nM for all). It also binds to neuropeptide FF receptor 1 (NPFF1) and NPFF2 (Kis = 108 and 79 nM, respectively) and reverses NPFF-induced inhibition of forskolin-induced cAMP accumulation in CHO cells expressing human NPFF2 in a concentration-dependent manner. BIBP3226 inhibits NPY-induced increases in perfusion pressure in isolated rat kidney but not the NPY-induced twitch response in isolated rat vas deferens (IC50s = 26 and >10,000 nM, respectively). BIBP3226 inhibits NPY-induced increases in blood pressure in pithed rats (ED50 = 0.11 mg/kg). It also inhibits NPFF-induced hypothermia in mice when administered intracerebroventricularly (i.c.v.) at a dose of 5 nmol.

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	250.0	527.89

4. Stock solution preparation table:

Concentration / Solvent Volume / Mass	1 mg	5 mg	10 mg
1 mM	2.11 mL	10.56 mL	21.12 mL
5 mM	0.42 mL	2.11 mL	4.22 mL
10 mM	0.21 mL	1.06 mL	2.11 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. Barrios VE, Nelson AG, Toombs CF. BIBP3226 inhibits neuropeptide Y and pancreatic polypeptide potentiated neurogenic vasoconstriction. Life Sci. 1998;62(6):525-32. doi: 10.1016/s0024-3205(97)01148-x. PMID: 9464464.

In vivo study

1. Fang Q, Guo J, He F, Peng YL, Chang M, Wang R. In vivo inhibition of neuropeptide FF agonism by BIBP3226, an NPY Y1 receptor antagonist. Peptides. 2006 Sep;27(9):2207-13. doi: 10.1016/j.peptides.2006.04.002. Epub 2006 Jun 9. PMID: 16762456.

7. Bioactivity

Biological target:

BIBP3226 TFA is a neuropeptide Y Y1 (NPY Y1) and neuropeptide FF (NPFF) receptor antagonist, with Kis of 1.1, 79, and 108 nM for rNPY Y1, hNPFF2, and rNPFF, respectively.

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In vitro activity

The NPY Y1 selective antagonist BIBP3226 inhibited the vascular effects of neuropeptide Y (NPY) in vitro (IC50 =126 nM). BIBP3226 also inhibited the effects of the selective Y1 agonist [Leu31,Pro34]NPY and completely abolished the effects of avian pancreatic polypeptide that was shown to be capable of potentiating neurogenic vasoconstriction.

Reference: Life Sci. 1998;62(6):525-32. https://www.sciencedirect.com/science/article/abs/pii/S002432059701148X?via%3Dihub

In vivo activity

The antagonistic effects of BIBP3226 on several in vivo pharmacologic profiles induced by exogenous NPFF and NPVF was investigated. BIBP3226 (5 nmol) injected into the third ventricle completely antagonized the hypothermic effects of NPFF (30 nmol) and NPVF (30 nmol) after cerebral administration in mice; BIBP3226 (5 nmol, i.c.v.) prevented the anti-morphine actions of NPFF (10 nmol, i.c.v.) in the mouse tail-flick assay; in urethane-anaesthetized rats, both NPFF (200 nmol/kg, i.v.) and NPVF (200 nmol/kg, i.v.) increased the mean arterial blood pressure, which were significantly reduced by pretreatment with BIBP3226 (500 nmol/kg, i.v.). Collectively, these data suggest that BIBP3226, a mixed antagonist of NPY Y1 and NPFF receptors, shows in vivo antagonistic effects on NPFF receptors.

Reference: Peptides. 2006 Sep;27(9):2207-13.
https://www.sciencedirect.com/science/article/abs/pii/S0196978106001902?via%3Dihub

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.