

Product Data Sheet

Product Name: BWX 46
Cat. No.: GC14789

Chemical Properties

Cas. No. 172997-92-1

(S,S,S,1Z,1'Z,2S,2'S)-N'1,N''1'-

Chemical Name ((R,S,6S,6'S,7Z,7'Z,9S,9'S,10Z,10'Z,12S,12'S,13Z,13'Z,15S,15'S,16Z,16'Z,18R,18'R,19Z,19'Z,21S,21'S)-18,18'-(disulfanediybis(methylene))bis(1-amino-12-(3-guanidinopropyl)-8,11,14,17,20-pentahydroxy-6-((Z)-hydroxy(((S)-1-hyd

SMILES CCC[C@@](/N=C(O)/[C@](/N=C(O)/[C@](/N=C(O)/[C@](/N=C(O)/[C@](/N=C(O)/[C@](/N=C(O)/[C@](/N=C(O)/[C@](N)([H])CC1=CC=C(O)C=C1)([H])[C@@](CC)([H])C([H])CC(O)=N)([H])CC(C)C([H])CSSC[C@@](/N=C(O)/[C@](/N=C(O)/[C@](/N=C(O)/[C@](/N=C(O)/[C@](N)([H])CC2=CC=C(O)C

Formula $C_{116}H_{186}N_{36}O_{28}S_2$ M.Wt 2597.07

Solubility ≥ 260.4 mg/mL in DMSO with ultrasonic, <12.99 mg/mL in Water, <12.99 mg/mL in EtOH Storage Desiccate at $-20^{\circ}C$

General tips For obtaining a higher solubility, please warm the tube at $37^{\circ}C$ and shake it in the ultrasonic bath for a while. Stock solution can be stored below $-20^{\circ}C$ for several months.

Shipping Condition Evaluation sample solution: ship with blue ice. All other available size: ship with RT, or blue ice upon request.

Structure

Background

IC50: 0.5 nM for Y5

The actions of neuropeptide Y (NPY) are mediated by at least six G-protein coupled receptors denoted as Y1, Y2, Y3, Y4, Y5, and y6. Investigations using receptor selective ligands and receptor knock-out mice show that NPY effects on feeding are mediated by both Y1 and Y5 receptors. BWX 46 is a Y5 receptor selective agonist.

In vitro: BWX 46 selectively bound Y5 receptors, and inhibited cAMP synthesis by Y5 cells with potencies comparable to that of NPY. In addition, BWX 46 ($10 \mu M$) exhibited no significant effect on the cAMP synthesis by Y1, Y2, and Y4 cells. Thus, BWX 46 constitutes the lowest molecular weight Y5 selective agonist reported to date [1].

In vivo: Intrahypothalamic-injection of 30 and 40 μg of BWX 46 stimulated the food intake by rats in a gradual manner, reaching maximal level 8 h after injection. This response was similar to that exhibited by other Y5 selective agonists, but differed from that of NPY, which exhibited a rapider orexigenic stimulus within 1 h [1].

Clinical trial: Up to now, BWX 46 is still in the preclinical development stage.

Reference:

[1] Ambikaipakan Balasubramaniam, Sulaiman Sheriff, Weixu Zhai, William T. Chance. Bis(31/31'){{[Cys31, Nva34]NPY(27-36)-NH2}}: a neuropeptide Y (NPY) Y5 receptor selective agonist with a latent stimulatory effect on food intake in rats. Peptides 23 (2002) 1485-1490

Caution: Product has not been fully validated for medical applications. For research use only.

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