

Product Data Sheet

Product Name: BisfluoroModafinil (Lauflumide)

Cat. No.: GC64880

Chemical Properties

Cas. No. 90280-13-0

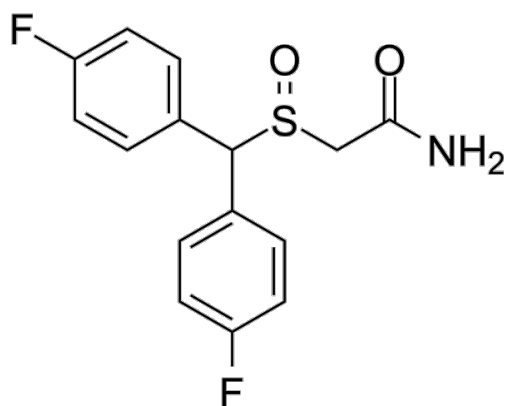
Formula C₁₅H₁₃F₂NO₂S M.Wt 309.33

Solubility DMSO : 100 mg/mL (323.28 mM; Storage Store at -20°C
Need ultrasonic)

General tips For obtaining a higher solubility , please warm the tube at 37 °C and shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°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



Protocol

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

Tel: (909) 407-4943 Fax: (626) 353-8530 E-mail: tech@glpbio.com

Address: 10292 Central Ave. #205, Montclair, CA, USA

Product Data Sheet

Animal experiment [1]:

Animal models Male C57BL/6J mice

Male C57BL/6J mice, 10 weeks old, were maintained under a 12-h light and 12-h dark cycle at a temperature of 25°C and humidity of 50%±10%, free with water Preparation Method and diet. C57BL/6J mice were intraperitoneally injected with vehicle, BisfluoroModafinil (64mg/kg), or modafinil (150mg/kg) at light onset. The sleep state of mice was recorded continuously for 24h after injections.

Dosage form 64mg/kg for once; i.p.

Applications BisfluoroModafinil significantly enhanced the wakefulness of C57BL/6J mice within 24 hours and inhibited non-rapid eye movement sleep.

References:

[1] Luca G, Bandarabadi M, Konofal E, et al. Lauflumide (NLS-4) is a new potent wake-promoting compound[J]. Frontiers in neuroscience, 2018, 12: 519.

Background

BisfluoroModafinil (Lauflumide) is a modafinil analog, which is used to improve narcolepsy [1]. BisfluoroModafinil selectively inhibits dopamine reuptake, blocks the activity of dopamine transporter, and prolongs the period of wakefulness[2]. BisfluoroModafinil has been widely used as a model compound to study the degradation state under various conditions, and as an internal reference to optimize the gas chromatography analysis conditions for identifying related compounds[3].

In vivo, BisfluoroModafinil treatment via a single intraperitoneal injection at a dose of 64mg/kg significantly enhanced the wakefulness of C57BL/6J mice within 24 hours and inhibited non-rapid eye movement sleep[2].

References:

[1] Bakota E L, Nandrea J M. Development and Validation of an Analytical Method to Identify and

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

Tel: (909) 407-4943 Fax: (626) 353-8530 E-mail: tech@glpbio.com

Address: 10292 Central Ave. #205, Montclair, CA, USA

Product Data Sheet

Quantitate Novel Modafinil Analogs in Products Marketed as Dietary Supplements[J]. Journal of Dietary Supplements, 2025, 22(2): 329-344.

[2] Luca G, Bandarabadi M, Konofal E, et al. Lauflumide (NLS-4) is a new potent wake-promoting compound[J]. Frontiers in neuroscience, 2018, 12: 519.

[3] Dowling G, Kavanagh P V, Talbot B, et al. Outsmarted by nootropics? An investigation into the thermal degradation of modafinil, modafinic acid, adrafinil, CRL-40,940 and CRL-40,941 in the GC injector: formation of 1, 1, 2, 2-tetraphenylethane and its tetra fluoro analog[J]. Drug Testing and Analysis, 2017, 9(3): 518-528.

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

Tel: (909) 407-4943 Fax: (626) 353-8530 E-mail: tech@glpbio.com

Address: 10292 Central Ave. #205, Montclair, CA, USA