

Product Data Sheet

Product Name: GW311616 hydrochloride

Cat. No.: GC13851

Chemical Properties

Cas No. 197890-44-1

Chemical Name (3S,3aS,6aR)-3-isopropyl-1-(methylsulfonyl)-4-((E)-4-(piperidin-1-yl)but-2-enyl)hexahydropyrrolo[3,2-b]pyrrol-2(1H)-one hydrochloride

Canonical SMILES CC([C@@](C1=O)([H])[C@@]2([H])[C@@](N1S(C)(=O)=O)([H])CCN2C/C([H])=C([H])/CN3CCCC3)=O)C.Cl

Formula C₁₉H₃₂ClN₃O₄S

M.Wt

433.99

Solubility ≥ 21.7 mg/mL in DMSO

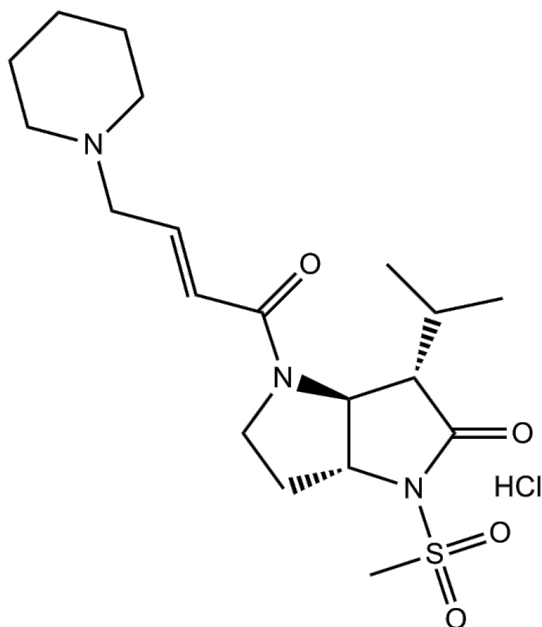
Storage

Store at -20°C

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



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

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Background

GW311616 hydrochloride is a potent, selective, intracellular, orally bioavailable and long duration inhibitor of human neutrophil elastase (HNE) with an IC₅₀ value of 22nM [1].

GW311616 hydrochloride has been found to be selective over other human serine proteases with IC₅₀ values of 22nM for HNE, >100μM for trypsin, cathepsin G, and plasmin, >3μM for chymotrypsin and tissue plasminogen activator. In HNE enzyme kinetic tests, GW311616 has been reported to inhibit HNE with a K_i value of 0.13nM. In addition, GW311616 has been revealed to inhibit HWB with an IC₅₀ values of 0.67μM in HWB assay. Moreover, by measurement of intraneutrophil elastase activity, GW311616 hydrochloride has been suggested to have a dose-response and duration of action in blood samples of dog [1].

References:

[1] Macdonald SJ¹, Dowle MD, Harrison LA, Shah P, Johnson MR, Inglis GG, Clarke GD, Smith RA, Humphreys D, Molloy CR, Amour A, Dixon M, Murkitt G, Godward RE, Padfield T, Skarzynski T, Singh OM, Kumar KA, Fleetwood G, Hodgson ST, Hardy GW, Finch H. The discovery of a potent, intracellular, orally bioavailable, long duration inhibitor of human neutrophil elastase-GW311616A a development candidate. *Bioorg Med Chem Lett*. 2001 Apr 9;11(7):895-8.

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