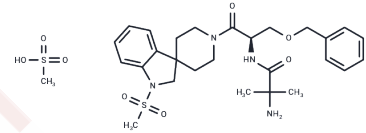


Ibutamoren Mesylate

Chemical Properties

CAS No. :	159752-10-0
Formula:	C ₂₈ H ₄₀ N ₄ O ₈ S ₂
Molecular Weight:	624.77
Storage:	Powder: -20°C for 3 years In solvent: -80°C for 1 year Actual storage temperature shall be subject to the COA.



Biological Description

Description	Ibutamoren Mesylate (MK-0677) is a potent, non-peptide Growth hormone secretagogue receptor (GHSR) agonist.
Targets(IC50)	GHSR
In vivo	Following oral administration Ibutamoren Mesylate(MK0677) amplifies episodic GH release. Mechanistically, it synergizes with growth hormone releasing hormone (GHRH) through a receptor and signal transduction pathway distinct from that of GHRH and is a functional antagonist of somatostatin (SRIF). MK0677 also acts on the arcuate nucleus and appears to stimulate GHRH release. By using 35S-MK0677, a new G-protein coupled receptor for MK0677 was characterized in the plasma membrane fraction of pituitary and hypothalamic tissue. The receptor is present in very low abundance and couples to phospholipase C. Other ligands selective for this receptor also cause synchronization of well-defined pathways leading to GH release. Repeated oral treatment of dogs once daily with MK0677 initiates amplified pulsatile GH release accompanied by increases in IGF-1 that are sustained. The unique biological properties of MK0677 and other synthetic ligands that bind to the same receptor force us to predict that these ligands mimic a naturally occurring hormone that regulates pulsatile GH release[1].

Solubility Information

Solubility	DMSO: 252.5 mg/mL (404.15 mM), Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+40% PEG300+5% Tween 80+45% Saline: 2 mg/mL (3.2 mM), Sonication is recommended. <i>Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one. Dissolve by heating and/or sonication if necessary. Working solution is recommended to be prepared and used immediately. The formulation provided above is for reference purposes only. In vivo formulations may vary and should be modified based on specific experimental conditions.</i>

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	1.6006 mL	8.0029 mL	16.0059 mL
5 mM	0.3201 mL	1.6006 mL	3.2012 mL
10 mM	0.1601 mL	0.8003 mL	1.6006 mL
50 mM	0.032 mL	0.1601 mL	0.3201 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

Smith R G , Pong S S , Hickey G , et al. Modulation of pulsatile GH release through a novel receptor in hypothalamus and pituitary gland[J]. Recent Progress in Hormone Research, 1996, 51:261-85; discussion 285-6.

Aydemir M , Durap F , Kayan C , et al. Insulin-Like Growth Factor-1 and Growth Hormone (GH) Levels in Canine Cerebrospinal Fluid are Unaffected by GH or GH Secretagogue (MK-0677) Administration[J]. Hormone and Metabolic Research, 1999, 31(02/03):133-137.

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