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## Product Data Sheet

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Product Name: Cimetropium Bromide (DA-3177)

Cat. No.: GC30955

**Chemical Properties**

Cas. No. 51598-60-8

SMILES C[N+]1([C@H]2[C@@H](O3)[C@@H]3[C@@H]1C[C@H](OC([C@@H](C4=CC=CC=C4)CO)=O)C2)CC5CC5.[Br-]Formula C<sub>21</sub>H<sub>28</sub>BrNO<sub>4</sub>

M.Wt 438.36

Solubility Water : 50 mg/mL (114.06 mM)

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 **Background**

Cimetropium Bromide (DA-3177) is a mAChR antagonist for long-term treatment of irritable bowel syndrome.

Cimetropium Bromide behaves as a competitive antagonist of muscarinic-mediated contractions in isolated colonic preparations from both species, with affinity values (pA<sub>2</sub>) ranging between 7.41 and 7.82[1]. Cimetropium has potent antimuscarinic effect in inhibition of contraction of longitudinal muscle preparations. In the superfusion experiments of the preparation which has been preloaded with labelled choline, Cimetropium decreases the labelled ACh release induced by electrical field stimulation under the muscarinic autoinhibition blocked-condition[2].

When administered intravenously to conscious dogs provided with a colonic Thiry fistula, Cimetropium is a potent inhibitor of large bowel motility evoked by both exogenous and endogenous stimuli. Cimetropium Bromide (10-100 µg/kg) counteracts colonic motor response to neostigmine administration with an ID<sub>50</sub> of 27.9 µg/kg; both tonic and phasic components of contractile response are affected. In a comparable range of doses

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

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(3-100 $\mu$ g/kg), the drug inhibits motor activity elicited by intraluminal distension[1].

[1]. Identification of orally administered cimetropium bromide in the colon of the rat and its possible local spasmolytic effect. [2]. Saitoh N, et al. Characterization of antimuscarinic effect of cimetropium bromide in guinea pig ileum. J Smooth Muscle Res. 1997 Feb;33(1):1-9.

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