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## DATASHEET

Calmidazolium Chloride

### Product overview

<b>Name</b>	Calmidazolium Chloride
<b>Cat No</b>	HB0156
<b>Alternative names</b>	R 24571
<b>Biological action</b>	Antagonist
<b>Purity</b>	>98%
<b>Description</b>	Calmodulin (CaM) antagonist

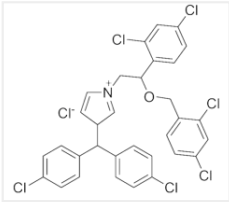
### Biological Data

<b>Biological description</b>	Calmodulin (CaM) antagonist. Inhibits calmodulin-dependent phosphodiesterase ( $IC_{50} = 0.15 \mu M$ ). Antagonises $Ca^{2+}$ -transporting ATPase calmodulin-induced activation ( $IC_{50} = 0.35 \mu M$ ). Inhibits adenylyl cyclase, soluble fusion protein, ACIX and ACV-ACII fusion proteins. Blocks L-type calcium channels as well as voltage-dependent $Na^+$ and $K^+$ channel currents; increases intracellular calcium. Shows cytotoxic and apoptotic effects.
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### Solubility & Handling

<b>Storage instructions</b>	+4 °C
<b>Solubility overview</b>	Soluble in DMSO (100mM) or ethanol (100mM)
<b>Important</b>	This product is for RESEARCH USE ONLY and is not intended for therapeutic or diagnostic use. Not for human or veterinary use.

### Chemical Data

<b>Chemical name</b>	1-[Bis(4-chlorophenyl)methyl]-3-[2-(2,4-dichlorophenyl)-2-(2,4-dichlorobenzyloxy)ethyl]-1H-imidazolium chloride
<b>Molecular Weight</b>	687.7
<b>Chemical structure</b>	

<b>Molecular Formula</b>	$C_{31}H_{23}Cl_7N_2O$
<b>CAS Number</b>	57265-65-3
<b>PubChem identifier</b>	644274
<b>SMILES</b>	<chem>C1=CC(=CC=C1C(C2=CC=C(C=C2)Cl)N3C=C[N+]=(C3)CC(C4=C(C=C(C=C4)Cl)Cl)OCC5=C(C=C(C=C5)Cl)Cl)Cl.[Cl-]</chem>
<b>InChiKey</b>	YGEIMSMISRCBFF-UHFFFAOYSA-M

### References

Comparison of the calmodulin antagonists compound 48/80 and calmidazolium.

Gietzen K (1983) *Biochem J* 216(3)

**PubMedID** [6141789](#)

**Small ligands modulating the activity of mammalian adenylyl cyclases: a novel mode of inhibition by calmidazolium.**

Haunsø A *et al* (2003) *Mol Pharmacol* 63(3)

**PubMedID** [12606770](#)

**Cardiotoxicity of calmidazolium chloride is attributed to calcium aggravation, oxidative and nitrosative stress, and apoptosis.**

Kumar S *et al* (2009) *Free Radic Biol Med* 47(6)

**PubMedID** [19497364](#)

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