

## Product Datasheet

### D-Histidine hydrochloride hydrate (orb3136469)

<b>Catalog Number</b>	orb3136469
<b>Category</b>	Small Molecules
<b>Description</b>	<p>D-Histidine hydrochloride hydrate is an agent that targets bacterial quorum sensing systems, such as the RhlI/RhlR pathway, to inhibit biofilm formation with antibacterial properties. It acts by non-covalently binding to bacterial regulatory factors or copper ion complexes, selectively inhibiting bacterial biofilm formation and motility. Additionally, D-Histidine hydrochloride hydrate downregulates quorum sensing-related gene expression, reduces synthesis of virulence factors (such as alginate and protease), and disrupts bacterial membrane stability. This results in inhibiting biofilm formation, promoting the disassembly of mature biofilms, and increasing antibiotic sensitivity. Furthermore, it serves as an efficient catalyst for the salt-induced peptide formation (SIPF) reaction by forming complexes with copper ions (Cu<sup>2+</sup>), which facilitates the condensation of amino acids to form dipeptides, such as di-alanine and di-lysine.</p>
<b>Target</b>	Antibacterial, Mitochondrial Metabolism
<b>MW</b>	209.63
<b>CAS Number</b>	328526-86-9
<b>Formula</b>	C <sub>6</sub> H <sub>12</sub> ClN <sub>3</sub> O <sub>3</sub>
<b>SMILES</b>	C([C@H](C(O)=O)N)C1=CN=CN1.Cl.O
<b>Storage</b>	-20°C
<b>Note</b>	For research use only
<b>Expiration Date</b>	12 months from date of receipt.

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