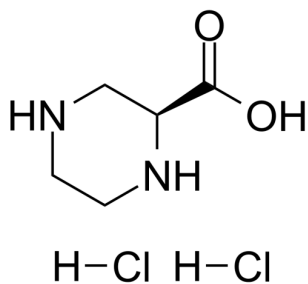


## Certificate of Analysis

### Compound Information

|                            |  |
|----------------------------|--|
| <b>Product Name:</b>       | (S)-Piperazine-2-carboxylic acid dihydrochloride                             |
| <b>Cat. No.:</b>           | 1022715  |
| <b>CAS No.:</b>            | 158663-69-5  |
| <b>Molecular Formula:</b>  | C <sub>5</sub> H <sub>12</sub> Cl <sub>2</sub> N <sub>2</sub> O <sub>2</sub> |
| <b>Molecular Weight:</b>   | 203.07   |
| <b>Chemical Structure:</b> |  |



### Batch Information

|                     |                        |
|---------------------|------------------------|
| <b>Batch No.:</b>   | Ld050802442            |
| <b>Storage:</b>     | RT, protect from light |
| <b>Mfg. Date:</b>   | 2012-11-09             |
| <b>Retest Date:</b> | 2021-11-08             |
| <b>Origin:</b>      | Shanghai, China        |

### QC Summary

|                                    |   |
|------------------------------------|---|
| <b>Appearance:</b>                 | White to off-white (Solid)  |
| <b><sup>1</sup>H NMR Spectrum:</b> | Consistent with structure   |
| <b>MS:</b>                         | Consistent with structure   |
| <b>Purity (NMR):</b>               | ≥98.0%  |
| <b>Conclusion:</b>                 | The product has been tested and complies with the given specifications. |

Caution: Research use only and are not intended for human use.

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