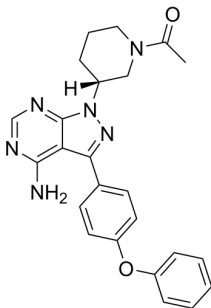


## Certificate of Analysis

### Compound Information

<b>Product Name:</b>	(R)-1-(3-(4-Amino-3-(4-phenoxyphenyl)-1H-pyrazolo[3,4-d]pyrimidin-1-yl)piperidin-1-yl)ethan-1-one (Ibrutinib Impurity)
<b>Cat. No.:</b>	1326039
<b>CAS No.:</b>	1288338-95-3
<b>Molecular Formula:</b>	C <sub>24</sub> H <sub>24</sub> N <sub>6</sub> O <sub>2</sub>
<b>Molecular Weight:</b>	428.49
<b>Chemical Structure:</b>	

### Batch Information

<b>Batch No.:</b>	Le1130111046
<b>Storage:</b>	2-8°C, protect from light
<b>Test Date:</b>	2021-12-07
<b>Retest Date:</b>	2024-12-06
<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>LCMS:</b>	Consistent with structure
<b>Purity (LCMS):</b>	99.86%
<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.

Tel: 400-821-0725

E-mail: [product@leyan.com](mailto:product@leyan.com)

Address: No. 1999 Zhangheng Road, Building 3, Zhangjiang High-Tech Park, Shanghai