## **Certificate of Analysis**

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Product Identificat	Chemical Structure		
Catalog number Compound name	HB0036 RS-CPP	< <sup>0</sup> <sup>₩</sup> -OH	
Chemical name	3-(2-Carboxypiperazin-4-yl)propyl-1-phosphonic acid	СЛОН	
Batch number	E1835-5-9		
Batch molecular formula	C <sub>8</sub> H <sub>17</sub> N <sub>2</sub> O <sub>5</sub> P.H <sub>2</sub> O	N CO <sub>2</sub> H	
Batch molecular weight	270.22	H -	
Method	QC requirement	QC Result	
NMR	1H NMR in $D_2O$ at 400 MHz consistent with structure	Meets specification	
Mass spectrum	Electrospray negative analysis consistent with structure	Meets specification	
Microanalysis	Elemental analysis is within 0.4% for the batch molecular formula	Meets specification	
TLC	TLC analysis in 50% PAW:BuOH shows one spot under ninhydrin	Meets specification: R <sub>f</sub> =0.1	
Physical appearance	White to off-white solid	Meets specification: White solid	
Solubility	Soluble in water (100 mM)	Meets specification	

Produced by	Signature	Roman
Passed by	Signature	S
	Date	12/07/2022

This product is for RESEARCH USE ONLY and is not intended for therapeutic or diagnostic use. Not for human or veterinary use.