## **Certificate of Analysis**



| Product Identification  |   | Chemical Structure   |  |
|-------------------------|---|--|--|
| Catalog number          | HB0251  |  |  |
| Compound name           | DL-AP5  |  |  |
| Chemical name           | DL-2-Amino-5-phosphonopentanoic acid                              | NH <sub>2</sub>  |  |
|                         |   | PO(OH)   |  |
|                         |   | $HO_2C^2 \checkmark \checkmark \land $ |  |
| Batch number            | E2043-2-8   |  |  |
| Batch molecular formula | C <sub>5</sub> H <sub>11</sub> NNaO <sub>5</sub> P                |  |  |
| Batch molecular weight  | 197.13  |  |  |
| Method                  | QC requirement  | QC Result  |  |
| method                  |   |  |  |
| HPLC                    | Chiral HPLC shows >98% purity as two enantiomers                  | Meets specification: 100%  |  |
| NMR                     | 1H NMR in $D_2O$ at 400 MHz consistent with structure             | Meets specification  |  |
| Mass spectrum           | Electrospray negative analysis consistent with<br>structure       | Meets specification  |  |
| Microanalysis           | Elemental analysis is within 0.4% for the batch molecular formula | Meets specification  |  |
| TLC                     | TLC analysis in 1:1 PAW:BuOH shows one spot with<br>ninhydrin     | Meets Specification; Rf~0.2  |  |
| Physical appearance     | White to off-white solid  | Meets specification: White solid   |  |
| Solubility              | Soluble in water (100 mM)   | Meets specification  |  |
| •                       |   | •  |  |

| Produced by | Signature | Roch       |
|-------------|-----------|------------|
| Passed by   | Signature | S          |
|             | Date      | 19/10/2022 |

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