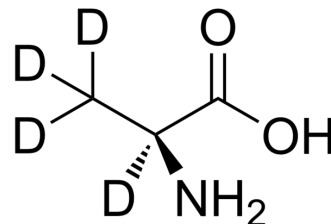


## L-Alanine-d4

|                           |  |       |          |
|---------------------------|--|-------|----------|
| <b>Cat. No.:</b>          | HY-N0229S3   |       |          |
| <b>CAS No.:</b>           | 18806-29-6   |       |          |
| <b>Molecular Formula:</b> | C <sub>3</sub> H <sub>3</sub> D <sub>4</sub> NO <sub>2</sub> |       |          |
| <b>Molecular Weight:</b>  | 93.12  |       |          |
| <b>Target:</b>            | Endogenous Metabolite  |       |          |
| <b>Pathway:</b>           | Metabolic Enzyme/Protease                                    |       |          |
| <b>Storage:</b>           | Powder   | -20°C | 3 years  |
|                           |  | 4°C   | 2 years  |
|                           | In solvent   | -80°C | 6 months |
|                           |  | -20°C | 1 month  |



### SOLVENT & SOLUBILITY

#### In Vitro

H<sub>2</sub>O : ≥ 125 mg/mL (1342.35 mM)  
 \* "≥" means soluble, but saturation unknown.

| Preparing Stock Solutions | Solvent Mass  |            |             |       |
|---------------------------|---------------|------------|-------------|-------|
|                           | Concentration | 1 mg       | 5 mg        | 10 mg |
| 1 mM                      | 10.7388 mL    | 53.6942 mL | 107.3883 mL |       |
| 5 mM                      | 2.1478 mL     | 10.7388 mL | 21.4777 mL  |       |
| 10 mM                     | 1.0739 mL     | 5.3694 mL  | 10.7388 mL  |       |

Please refer to the solubility information to select the appropriate solvent.

### BIOLOGICAL ACTIVITY

#### Description

L-Alanine-d4 (L-2-Aminopropionic acid-d4) is the deuterium labeled L-Alanine. L-Alanine is a non-essential amino acid, involved in sugar and acid metabolism, increases immunity, and provides energy for muscle tissue, brain, and central nervous system.

#### In Vitro

Stable heavy isotopes of hydrogen, carbon, and other elements have been incorporated into drug molecules, largely as tracers for quantitation during the drug development process. Deuteration has gained attention because of its potential to affect the pharmacokinetic and metabolic profiles of drugs<sup>[1]</sup>.  
 MCE has not independently confirmed the accuracy of these methods. They are for reference only.

### REFERENCES

[1]. Russak EM, et al. Impact of Deuterium Substitution on the Pharmacokinetics of Pharmaceuticals. *Ann Pharmacother.* 2019;53(2):211-216.

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**Caution: Product has not been fully validated for medical applications. For research use only.**

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