## Docosahexaenoic acid-d<sub>5</sub>

| Cat. No.:          | HY-B2167S   |              |          |  |  |  |
|--------------------|---|--------------|----------|--|--|--|
| CAS No.:           | 1197205-71  | 1197205-71-2 |          |  |  |  |
| Molecular Formula: | C <sub>22</sub> H <sub>27</sub> D <sub>5</sub> O <sub>2</sub> |              |          |  |  |  |
| Molecular Weight:  | 333.52  |              |          |  |  |  |
| Target:            | Endogenou   | is Metabo    | olite    |  |  |  |
| Pathway:           | Metabolic E   | Enzyme/F     | Protease |  |  |  |
| Storage:           | Pure form   | -20°C        | 3 years  |  |  |  |
|                    | In solvent  | -80°C        | 6 months |  |  |  |
|                    |   | -20°C        | 1 month  |  |  |  |

## SOLVENT & SOLUBILITY

| In Vitro Ethanol : ≥ 50<br>DMSO : ≥ 50 m<br>Ethanol : ≥ 50<br>DMF : ≥ 50 mg<br>DMSO : ≥ 50 mg<br>DMSO : ≥ 50 m<br>* "≥" means s<br>Preparing<br>Stock Solution | Ethanol : ≥ 50 mg/mL<br>DMSO : ≥ 50 mg/mL (<br>Ethanol : ≥ 50 mg/mL<br>DMF : ≥ 50 mg/mL (14<br>DMF : ≥ 50 mg/mL (14<br>DMSO : ≥ 50 mg/mL (<br>* "≥" means soluble, | Ethanol : ≥ 50 mg/mL (149.92 mM)<br>DMSO : ≥ 50 mg/mL (149.92 mM)<br>Ethanol : ≥ 50 mg/mL (149.92 mM)<br>DMF : ≥ 50 mg/mL (149.92 mM)<br>DMF : ≥ 50 mg/mL (149.92 mM)<br>MSO : ≥ 50 mg/mL (149.92 mM)<br>* "≥" means soluble, but saturation unknown. |           |            |            |  |  |
|--|--|---|-----------|------------|------------|--|--|
|  | Preparing<br>Stock Solutions   | Mass<br>Solvent<br>Concentration  | 1 mg      | 5 mg       | 10 mg      |  |  |
|  |  | 1 mM  | 2.9983 mL | 14.9916 mL | 29.9832 mL |  |  |
|  |  | 5 mM  | 0.5997 mL | 2.9983 mL  | 5.9966 mL  |  |  |
|  |  | 10 mM   | 0.2998 mL | 1.4992 mL  | 2.9983 mL  |  |  |

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

| IOLOGICAL ACTIV |  |
|-----------------|--|
|                 |  |
| Description     | Docosahexaenoic acid-d <sub>5</sub> is the deuterium labeled Docosahexaenoic Acid. Docosahexaenoic Acid (DHA) is an omega-3<br>acid abundantly present brain and retina. It can be obtained directly from fish oil and maternal milk.  |
| In Vitro        | Stable heavy isotopes of hydrogen, carbon, and other elements have been incorporated into drug molecules, largely a tracers for quantitation during the drug development process. Deuteration has gained attention because of its potent 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

Лон



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

[2]. Horrocks LA, et al. Health benefits of docosahexaenoic acid (DHA). Pharmacol Res. 1999 Sep;40(3):211-25.

[3]. Gharami K, et al. Essential role of docosahexaenoic acid towards development of a smarter brain. Neurochem Int. 2015 Oct;89:51-62.

[4]. Lengqvist J, et al. Polyunsaturated fatty acids including docosahexaenoic and arachidonic acid bind to the retinoid Xreceptor alpha ligand-binding domain. Mol Cell Proteomics. 2004 Jul;3(7):692-703.

[5]. Gamoh S, et al. Chronic administration of docosahexaenoic acid improves reference memory-related learning ability in young rats. Neuroscience. 1999;93(1):237-41.

[6]. Ozsoy O, et al. The influence and the mechanism of docosahexaenoic acid on a mouse model of Parkinson's disease. Neurochem Int. 2011 Oct;59(5):664-70.

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

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