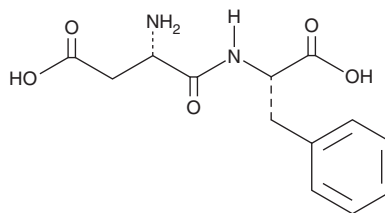


# PRODUCT INFORMATION

## L-Aspartyl-L-phenylalanine

Item No. 34197

**CAS Registry No.:** 13433-09-5  
**Formal Name:** L-α-aspartyl-L-phenylalanine  
**Synonyms:** α-Aspartylphenylalanine, Asp-Phe  
**MF:** C<sub>13</sub>H<sub>16</sub>N<sub>2</sub>O<sub>5</sub>  
**FW:** 280.3  
**Purity:** ≥98%  
**Supplied as:** A solid  
**Storage:** -20°C  
**Stability:** ≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

### Laboratory Procedures

L-Aspartyl-L-phenylalanine is supplied as a solid. A stock solution may be made by dissolving the L-aspartyl-L-phenylalanine in the solvent of choice, which should be purged with an inert gas. L-Aspartyl-L-phenylalanine is soluble in the organic solvent DMSO. The solubility of L-aspartyl-L-phenylalanine in DMSO is approximately 5 mg/ml.

L-Aspartyl-L-phenylalanine is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, L-aspartyl-L-phenylalanine should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. L-Aspartyl-L-phenylalanine has a solubility of approximately 0.3 mg/ml in a 1:2 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

### Description

L-Aspartyl-L-phenylalanine is a dipeptide inhibitor of angiotensin-converting enzyme (ACE) and a metabolite of the synthetic non-caloric sweetener aspartame (Item No. 26089).<sup>1,2</sup> It is formed from aspartame by intestinal intracellular esterases.<sup>2</sup> L-Aspartyl-L-phenylalanine inhibits ACE with a K<sub>i</sub> value of 11 μM for the rabbit enzyme.<sup>1</sup> Serum levels of L-aspartyl-L-phenylalanine are positively associated with pancreatic ductal adenocarcinoma.<sup>3</sup>

### References

1. Grobelny, D. and Galardy, R.E. A metabolite of aspartame inhibits angiotensin converting enzyme. *Biochem. Biophys. Res. Commun.* **128**(2), 960-964 (1985).
2. Tobey, N.A. and Heizer, W.D. Intestinal hydrolysis of aspartylphenylalanine--the metabolic product of aspartame. *Gastroenterology* **91**(4), 931-937 (1986).
3. Stolzenberg-Solomon, R.Z., Derkach, A., Moore, S., et al. Associations between metabolites and pancreatic cancer risk in a large prospective epidemiological study. *Gut* **69**(11), 2008-2015 (2020).

#### WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

#### SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the [complete](#) Safety Data Sheet, which has been sent via email to your institution.

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