

# PRODUCT INFORMATION



## $\alpha$ -Enolase (1-19)-biotin Peptide

Item No. 37628

### Overview and Properties

<b>Contents:</b>	This vial contains 1 mg of lyophilized peptide
<b>Synonym:</b>	Enolase-1 (1-19)-biotin
<b>Peptide Sequence:</b>	Biotin-SILKIHAREIFDSRGNPTV
<b>Uniprot No.:</b>	P06733
<b>Molecular Weight:</b>	2,379.8
<b>Form:</b>	Solid
<b>Storage:</b>	-20°C (as supplied)
<b>Stability:</b>	≥3 years

### Description

$\alpha$ -Enolase (1-19)-biotin peptide is a biotinylated form of a 19-amino acid N-terminal peptide fragment of  $\alpha$ -enolase, a glycolytic enzyme that catalyzes the conversion of 2-phosphoglycerate to phosphoenolpyruvate.<sup>1</sup>  $\alpha$ -Enolase also functions as a cell surface receptor for plasminogen on pathogens and activated immune cells, as an oxidative stress protein in endothelial cells, and as a chromatin binding partner to facilitate transcription.<sup>2-4</sup>  $\alpha$ -Enolase is an autoantigen in asthma, Hashimoto's encephalopathy, and rheumatoid arthritis, and has been found in the serum of pediatric patients with juvenile idiopathic arthritis.<sup>5-8</sup> Cayman's  $\alpha$ -Enolase (1-19)-biotin Peptide is intended for use as a negative control in the detection of autoantibodies against citrullinated  $\alpha$ -enolase and is the non-citrullinated form of Citrullinated  $\alpha$ -Enolase (R8 +R13) (1-19)-biotin Peptide (Item No. 37627).

### References

1. Zhu, X., Miao, X., Wu, Y., *et al.* ENO1 promotes tumor proliferation and cell adhesion mediated drug resistance (CAM-DR) in non-Hodgkin's lymphomas. *Exp. Cell Res.* **335(2)**, 216-223 (2015).
2. Song, Y., Luo, Q., Long, H., *et al.* Alpha-enolase as a potential cancer prognostic marker promotes cell growth, migration, and invasion in glioma. *Mol. Cancer* **13**, 65 (2014).
3. Subramanian, A. and Miller, D.M. Structural analysis of  $\alpha$ -enolase. Mapping the functional domains involved in down-regulation of the *c-myc* protooncogene. *J. Biol. Chem.* **275(8)**, 5958-5965 (2000).
4. Hsiao, K.-C., Shih, N.-Y., Fang, H.-L., *et al.* Surface  $\alpha$ -enolase promotes extracellular matrix degradation and tumor metastasis and represents a new therapeutic target. *PLoS One* **8(7)**, e69354 (2013).
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6. Moore, T.L., Gillian, B.E., Crespo-Pagnussat, S., *et al.* Measurement and evaluation of isotypes of anti-citrullinated fibrinogen and anti-citrullinated  $\alpha$ -enolase antibodies in juvenile idiopathic arthritis. *Clin. Exp. Rheumatol.* **32(5)**, 740-746 (2014).
7. Yoneda, M., Fujii, A., Ito, A., *et al.* High prevalence of serum autoantibodies against the amino terminal of  $\alpha$ -enolase in Hashimoto's encephalopathy. *J. Neuroimmunol.* **185(1-2)**, 195-200 (2007).
8. Cong, Y., Wang, L., Peng, R., *et al.* Timosaponin AIII induces antiplatelet and antithrombotic activity via Gq-mediated signaling by the thromboxane A2 receptor. *Sci. Rep.* **6**, 38757 (2016).

#### 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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