

## Product Data Sheet

Product Name: Citrullinated  $\alpha$ -Enolase (R8 + R14) (1-19)-biotin Peptide

Cat. No.: GC52351

### Chemical Properties

Cas. No.

Formula

M.Wt 0

Solubility

Storage -20°C

**General tips** For obtaining a higher solubility, please warm the tube at 37 °C and shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.

**Shipping Condition** Evaluation sample solution : ship with blue ice All other available size: ship with RT, or blue ice upon request.

Structure



### Background

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

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Citrullinated  $\alpha$ -Enolase (R8 + R14) (1-19)-biotin peptide is a biotinylated and citrullinated 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>2,3,4</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>5,6,7,8</sup>  $\alpha$ -Enolase is also subject to citrullination by peptidyl arginine deiminases (PADs) and citrullinated  $\alpha$ -enolase has been found in the synovial fluid of rheumatoid arthritis patients.<sup>7</sup> 's Citrullinated  $\alpha$ -Enolase (R8 + R14) (1-19)-biotin Peptide is intended for use in the detection of autoantibodies against  $\alpha$ -enolase citrullinated at R8 and R13.

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(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) 5.Nahm, D.-H., Lee, K.-H., Shin, J.-Y., et al. Identification of  $\alpha$ -enolase as an autoantigen associated with severe asthma. *J. Allergy Clin. Immunol.* 118(2)376-381(2006) 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)

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