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Produktinformation

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- Diagnostik & molekulare Diagnostik
- Laborgeräte & Service

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Lieferung & Zahlungsart

siehe unsere Liefer- und Versandbedingungen

Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

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PRODUCT INFORMATION

α-Enolase (human, recombinant)

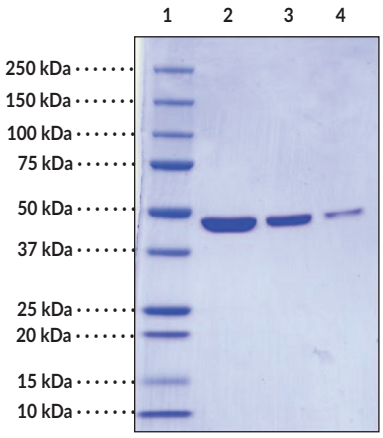
Item No. 25151

Overview and Properties

Synonym:	Enolase-1
Source:	Recombinant enolase expressed in *E. coli*
Amino acids:	1-434 (full length)
Uniprot No.:	P06733
Molecular Weight:	47.74 kDa
Storage:	-80°C (as supplied); avoid freeze/thaw cycles by aliquoting protein
Stability:	≥2 years
Purity:	≥95% estimated by SDS-PAGE
Supplied in:	20 mM HEPES, pH 7.5, 150 mM sodium chloride, and 5% glycerol
Protein Concentration:	***batch specific***

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

Image



Lane 1: MW Markers
Lane 2: α-Enolase (5 µg)
Lane 3: α-Enolase (2.5 µg)
Lane 4: α-Enolase (1 µg)

Representative gel image shown; actual purity may vary between each batch.

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PRODUCT INFORMATION

Description

α-Enolase, also known as enolase-1, is a glycolytic enzyme that catalyzes the conversion of 2-phosphoglycerate to phosphoenolpyruvate.[1] It is ubiquitously expressed in human tissues, including liver, spleen, kidney, and brain. In cells, α-enolase is primarily localized to the cytoplasm, however, an alternatively translated form localizes to the nucleus and lacks glycolytic enzyme activity.[1,2] α-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.[2-4] The *ENO1* promoter contains a hypoxia-response element, allowing α-enolase to facilitate aerobic glycolysis and contribute to the Warburg effect in tumor cells.[2] α-Enolase is overexpressed in multiple tumors, including glioma, neuroblastoma, pancreatic, prostate, and hepatocellular carcinomas. Its role as a plasminogen receptor facilitates extracellular matrix degradation and cancer invasion.[4] α-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.[5-8]

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 α-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 α-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 α-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 α-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 α-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 A_2 receptor. *Sci. Rep.* **6:38757** (2016).

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