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PRODUCT INFORMATION



Citrullinated α -Enolase (human, recombinant)

Item No. 21585

Overview and Properties

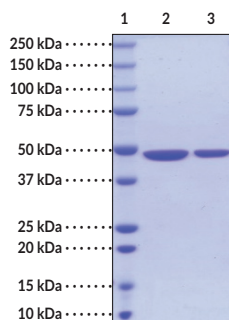
Synonym: Enolase-1
Source: Recombinant enolase expressed in *E. coli* citrullinated by PAD4
Amino Acids: 1-434 (full length)
Uniprot No.: P06733
Molecular Weight: 47.74 kDa
Storage: -80°C (as supplied); avoid freeze/thaw cycles by aliquoting protein
Stability: ≥ 2 years
Purity: $\geq 90\%$ estimated by SDS-PAGE
Supplied in: TBS, pH 7.4

Protein

Concentration: *batch specific* mg/ml

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

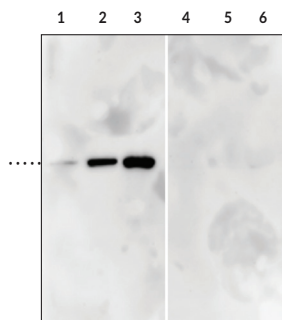
Images



Lane 1: MW Markers
Lane 2: 4 μ g α -Enolase (PAD4 Citrullinated)
Lane 3: 2 μ g α -Enolase (PAD4 Citrullinated)

Figure 1: SDS-PAGE analysis of citrullinated α -enolase.

Representative gel image shown.



Lane 1: Citrullinated α -Enolase (20 ng)
Lane 2: Citrullinated α -Enolase (100 ng)
Lane 3: Citrullinated α -Enolase (400 ng)
Lane 4: α -Enolase (20 ng)
Lane 5: α -Enolase (100 ng)
Lane 6: α -Enolase (400 ng)

Figure 2: Western blot analysis of α -enolase citrullination. α -Enolase and citrullinated α -enolase were reacted with Citrullinated α -Enolase Monoclonal Antibody (Clone 8D3) (Item No. 23000) and detected using Goat Anti-Mouse IgG HRP (Item No. 10004302).

Representative gel image shown.

MSILKIHARE	IFDSTRGNPTV	EVDLFTSKGL	FRAAVPSGAS	TGIYEALER
DNDKTRVMGK	GVSKAVEHIN	KTIAPALVSK	KLNVTEQEKI	DKLMIEMDGT
ENKSKFGANA	ILGVSLAVCK	AGAVEKGVPL	YRHIADLAGN	SEVILPVPF
NVINGGSHAG	NKLAMQEFMI	LPVGAANFRE	AMRIGAEVYH	NLKNVIKEY
GKDATNVGDE	GGFAPNILEN	KEGLELLKTA	IGKAGYTDKV	VIGMDVAASE
FFRSQKYDLD	FKSPDDPSRY	ISPDQLADLY	KSFIKDYPPV	SIEDPFDQDD
WGAWQKFTAS	AGIQVVGDDL	TVTNPKRIAK	AVNEKSCNCL	LLKVNQIGSV
TESLQACKLA	QANGWGMVMS	HRSGETEDTF	IADLVVGLCT	GQIKTGAPCR
SERLAKYNQL	LRIEEELGSK	AKFAGRNFRN	PLAK	

Identification of modified sites in Citrullinated α -Enolase (Item No. 21585). Citrullinated α -Enolase was detected by LC-MS/MS and analyzed using Mascot and Scaffold PTM software. Delimited arginines are indicated in teal. Citrullination sites shown are representative of typical results. Batch-to-batch variations may occur.

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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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 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 It 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 α -Enolase is also subject to citrullination by peptidyl arginine deiminases (PADs) and citrullinated α -enolase has been found in the synovial fluid of rheumatoid arthritis patients.⁹

References

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