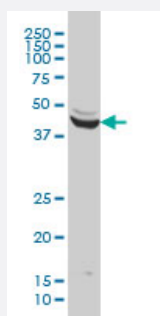


# ENO3 monoclonal antibody (M01), clone 5D1

Catalog # H00002027-M01

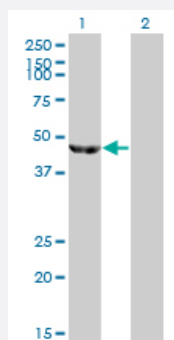
Size 100 ug

## Applications



### Western Blot (Cell lysate)

ENO3 monoclonal antibody (M01), clone 5D1 Western Blot analysis of ENO3 expression in HeLa ( Cat # L013V1 ).

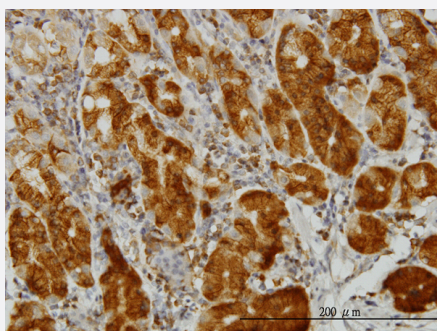


### Western Blot (Transfected lysate)

Western Blot analysis of ENO3 expression in transfected 293T cell line by ENO3 monoclonal antibody (M01), clone 5D1.

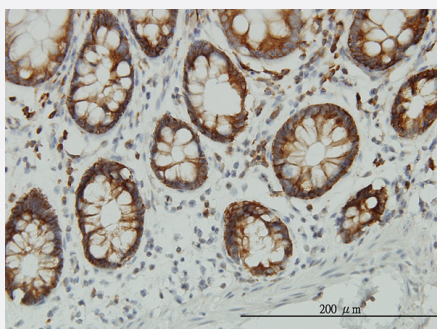
Lane 1: ENO3 transfected lysate(46.9 KDa).

Lane 2: Non-transfected lysate.



### Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections)

Immunoperoxidase of monoclonal antibody to ENO3 on formalin-fixed paraffin-embedded human stomach. [antibody concentration 1.5 ug/ml]

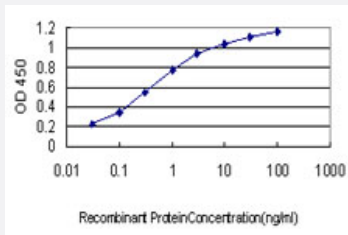


### Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections)

Immunoperoxidase of monoclonal antibody to ENO3 on formalin-fixed paraffin-embedded human colon. [antibody concentration 3 ug/ml]

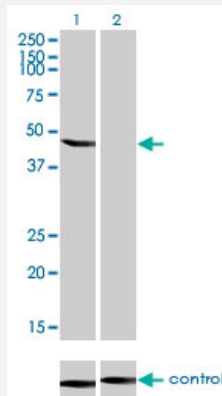
## Sandwich ELISA (Recombinant protein)

Detection limit for recombinant GST tagged ENO3 is approximately 0.03ng/ml as a capture antibody.



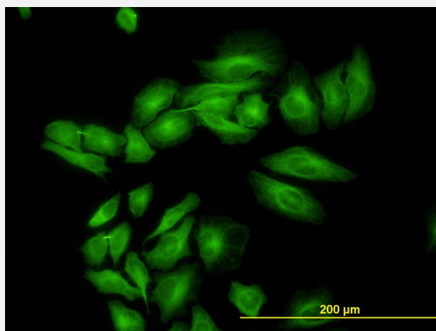
## RNAi Knockdown (Antibody validated)

Western blot analysis of ENO3 over-expressed 293 cell line, cotransfected with ENO3 Validated Chimera RNAi ( Cat # H00002027-R01V ) (Lane 2) or non-transfected control (Lane 1). Blot probed with ENO3 monoclonal antibody (M01), clone 5D1 (Cat # H00002027-M01 ). GAPDH ( 36.1 kDa ) used as specificity and loading control.

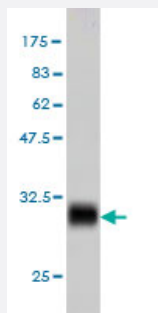


## Immunofluorescence

Immunofluorescence of monoclonal antibody to ENO3 on HeLa cell. [antibody concentration 10 ug/ml]



Western Blot detection against Immunogen (31.24 KDa) .



## Specification

### Product Description

Mouse monoclonal antibody raised against a partial recombinant ENO3.

### Immunogen

ENO3 (NP\_001967, 228 a.a. ~ 277 a.a) partial recombinant protein with GST tag. MW of the GST tag alone is 26 KDa.

Sequence	KTAIQAAGYPDKVVIGMDVAASEFYRNGKYDLDFKSPDDPARHITGEKLG
Host	Mouse
Reactivity	Human
Isotype	IgG2a Kappa
Quality Control Testing	Antibody Reactive Against Recombinant Protein. Western Blot detection against Immunogen (31.24 KDa) .
Storage Buffer	In 1x PBS, pH 7.4
Storage Instruction	Store at -20°C or lower. Aliquot to avoid repeated freezing and thawing.

## Applications

- Western Blot (Cell lysate)

ENO3 monoclonal antibody (M01), clone 5D1 Western Blot analysis of ENO3 expression in HeLa ( Cat # L013V1 ).

[Protocol Download](#)

- Western Blot (Transfected lysate)

Western Blot analysis of ENO3 expression in transfected 293T cell line by ENO3 monoclonal antibody (M01), clone 5D1.

Lane 1: ENO3 transfected lysate(46.9 KDa).

Lane 2: Non-transfected lysate.

[Protocol Download](#)

- Western Blot (Recombinant protein)

[Protocol Download](#)

- Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections)

Immunoperoxidase of monoclonal antibody to ENO3 on formalin-fixed paraffin-embedded human stomach. [antibody concentration 1.5 ug/ml]

[Protocol Download](#)

- Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections)

Immunoperoxidase of monoclonal antibody to ENO3 on formalin-fixed paraffin-embedded human colon. [antibody concentration 3 ug/ml]

[Protocol Download](#)

- Sandwich ELISA (Recombinant protein)

Detection limit for recombinant GST tagged ENO3 is approximately 0.03ng/ml as a capture antibody.

[Protocol Download](#)

- ELISA

- RNAi Knockdown (Antibody validated)

Western blot analysis of ENO3 over-expressed 293 cell line, cotransfected with ENO3 Validated Chimera RNAi ( Cat # H00002027-R01V ) (Lane 2) or non-transfected control (Lane 1). Blot probed with ENO3 monoclonal antibody (M01), clone 5D1 (Cat # H00002027-M01 ). GAPDH ( 36.1 kDa ) used as specificity and loading control.

[Protocol Download](#)

- Immunofluorescence

Immunofluorescence of monoclonal antibody to ENO3 on HeLa cell. [antibody concentration 10 ug/ml]

## Gene Info — ENO3

Entrez GeneID [2027](#)

GeneBank Accession# [NM\\_001976](#)

Protein Accession# [NP\\_001967](#)

Gene Name ENO3

Gene Alias MSE

Gene Description enolase 3 (beta, muscle)

Omim ID [131370](#)

Gene Ontology [Hyperlink](#)

**Gene Summary** This gene encodes one of the three enolase isoenzymes found in mammals. This isoenzyme, a homodimer, is found in skeletal muscle cells in the adult. A switch from alpha enolase to beta enolase occurs in muscle tissue during development in rodents. Mutations in this gene can be associated with metabolic myopathies that may result from decreased stability of the enzyme. Two transcripts have been identified for this gene that differ only in their 5' UTR. [provided by RefSeq]

**Other Designations** 2-phospho-D-glycerate hydrolyase|ENO3, muscle enolase 3 beta|OTTHUMP00000125242|beta enolase|enolase 3|enolase-3, beta, muscle|muscle specific enolase|skeletal muscle enolase

## Publication Reference

- [Relationships between the abundance of 29 proteins and several meat or carcass quality traits in two bovine muscles revealed by a combination of univariate and multivariate analyses.](#)

Brigitte Picard, Arnaud Cougoul, Sébastien Couvreur, Muriel Bonnet.

Journal of Proteomics 2022 Dec; 273:104792.

Application: Array, Bovine, Bovine muscles

- [Riboregulation of Enolase 1 activity controls glycolysis and embryonic stem cell differentiation.](#)

Ina Huppertz, Joel I Perez-Perri, Panagiotis Mantas, Thileepan Sekaran, Thomas Schwarzl, Francesco Russo, Dunja Ferring-Appel, Zuzana Koskova, Lyudmila Dimitrova-Paternoga, Eleni Kafkia, Janosch Hennig, Pierre A Neveu, Kiran Patil, Matthias W Hentze.

Molecular Cell 2022 Jul; 82(14):2666.

Application: WB-Ce, Human, HeLa cells

- [Protein Array-Based Approach to Evaluate Biomarkers of Beef Tenderness and Marbling in Cows: Understanding of the Underlying Mechanisms and Prediction.](#)

Mohammed Gagaoua, Muriel Bonnet, Brigitte Picard.

Foods (Basel, Switzerland) 2020 Aug; 9(9):E1180.

Application: Reverse Phase Protein Array (RPPA), Human, Human muscle protein

- [Quantification of biomarkers for beef meat qualities using a combination of Parallel Reaction Monitoring- and antibody-based proteomics.](#)

Muriel Bonnet, Julien Soulat, Joanna Bons, Stéphanie Léger, Leanne De Koning, Christine Carapito, Brigitte Picard.

Food Chemistry 2020 Jul; 317:126376.

Application: Array, Bovine, Bovine longissimus thoracis, Bovine semimembranosus

- [Beef tenderness and intramuscular fat proteomic biomarkers: Effect of gender and rearing practices.](#)

Picard B, Gagaoua M, Al Jammal M, Bonnet M.

Journal of Proteomics 2019 Mar; 200:1.

Application: WB-Ti, Bovine, Bovine muscle

- [Reverse Phase Protein array for the quantification and validation of protein biomarkers of beef qualities: The case of meat color from Charolais breed.](#)

Gagaoua M, Bonnet M, De Koning L, Picard B.

Meat Science 2018 Jul; 145:308.

Application: WB-Ti, Bovine, Bovine muscle

- [Beef tenderness and intramuscular fat proteomic biomarkers: muscle type effect.](#)

Picard B, Gagaoua M, Al-Jammas M, De Koning L, Valais A, Bonnet M.

PeerJ 2018 Jun; 6:e4891.

Application: WB-Ti, Bovine, Bovine muscle

- [Reverse phase protein arrays for the identification/validation of biomarkers of beef texture and their use for early classification of carcasses.](#)

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Food Chemistry 2018 Jun; 250:245.

Application: WB-Ti, Bovine, Bovine muscles

- [Unraveling proteome changes of Holstein beef M. semitendinosus and its relationship to meat discoloration during post-mortem storage analyzed by label-free mass spectrometry.](#)

Yu Q, Wu W, Tian X, Hou M, Dai R, Li X.

Journal of Proteomics 2016 Dec; 154:85.

Application: WB-Ti, Bovine, Bovine muscle

- [Human skeletal muscle fibre contractile properties and proteomic profile: Adaptations to 3-week unilateral lower limb suspension and active recovery.](#)

Brocca L, Longa E, Cannavino J, Seynnes O, de Vito G, McPhee J, Narici M, Pellegrino MA, Bottinelli R.

The Journal of Physiology 2015 Dec; 593(24):5361.

Application: WB-Ti, Human, Muscle

- [Inverse relationships between biomarkers and beef tenderness according to contractile and metabolic properties of the muscle.](#)

Picard B, Gagaoua M, Micol D, Cassar-Malek I, Hocquette JF, Terlouw CE.

Journal of Agricultural and Food Chemistry 2014 Oct; 62(40):9808.

Application: Dot, Bovine, Bovine muscle

- [The time course of the adaptations of human muscle proteome to bed rest and the underlying mechanisms.](#)

Brocca L, Cannavino J, Coletto L, Biolo G, Sandri M, Bottinelli R, Pellegrino MA.

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Application: WB-Ti, Human, Human vastus lateralis muscles

- [Functional analysis of beef tenderness.](#)

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Application: WB-Ti, Bovine, Bovine tenderness

- [Myomegalin is a novel A-kinase anchoring protein involved in the phosphorylation of cardiac myosin binding protein C.](#)

Uys GM, Ramburan A, Loos B, Kinnear CJ, Korkie LJ, Mouton J, Riedemann J, Moolman-Smook JC.

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Application: IF, IP, IP-WB, WB-Tr, Rat, H9C2 cardiomyocytes

- [Proteome dynamics during contractile and metabolic differentiation of bovine foetal muscle.](#)

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Animal 2009 Jul; 3(7):980.

Application: WB-Ti, Bovine, Bovine foetal muscles

- [Identification of alpha-Enolase as an Autoantigen in Lung Cancer: Its Overexpression Is Associated with Clinical Outcomes.](#)

Chang GC, Liu KJ, Hsieh CL, Hu TS, Charoenfuprasert S, Liu HK, Luh KT, Hsu LH, Wu CW, Ting CC, Chen CY, Chen KC, Yang TY, Chou TY, Wang WH, Whang-Peng J, Shih NY.

Clinical Cancer Research 2006 Oct; 12(19):5746.

Application: WB-Tr, Human, HeLa cells

## Pathway

- [Biosynthesis of alkaloids derived from histidine and purine](#)
- [Biosynthesis of alkaloids derived from ornithine](#)
- [Biosynthesis of alkaloids derived from shikimate pathway](#)
- [Biosynthesis of alkaloids derived from terpenoid and polyketide](#)
- [Biosynthesis of phenylpropanoids](#)
- [Biosynthesis of plant hormones](#)
- [Biosynthesis of terpenoids and steroids](#)
- [Glycolysis / Gluconeogenesis](#)
- [Metabolic pathways](#)
- [RNA degradation](#)

## Disease

- [Muscular Dystrophies](#)