Technical Data Sheet

Purified Mouse Anti- β-Enolase

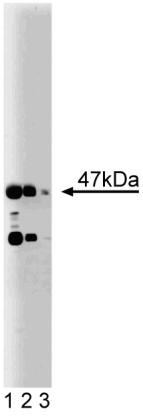
Product Information

Material Number:	**611196**
Alternate Name:	ENO-3
Size:	50 µg
Concentration:	250 µg/ml
Clone:	3/β-Enolase
Immunogen:	Human ENO-3 aa. 248-363
Isotype:	Mouse IgG2a
Reactivity:	QC Testing: Rat Tested in Development: Human, Dog
Target MW:	47 kDa
Storage Buffer:	Aqueous buffered solution containing BSA, glycerol, and ≤0.09% sodium azide.

Description

Enolases are glycolytic enzymes that interconvert 2-phosphoglycerate to phosphoenolpyruvate. They exist as three structurally related but genetically distinct isoforms. The active form of the enzyme is a homodimer formed from one of three subunits (α, β, and γ) that are encoded by distinct genes. The expression of each enolase gene is regulated in a tissue- and developmental- specific manner. While α-enolase has been reported to be expressed in nearly all embryonic and adult tissues, a developmental switch occurs between α and γ isoforms in cells of neuronal origin and between α- and β-enolase in developing skeletal muscle and heart. Early in embryogenesis, β-enolase reportedly is expressed at low levels in skeletal primary fibers. Increases in the expression of β-enolase are detected at the fetal stage of development and after birth. Levels of β-enolase are further increased in adult fast-twitch fibers and with terminal differentiation. In addition, β-enolase expression is regulated during hypoxia via the modulation of Sp1/Sp3 transcription factors levels. Thus, β-enolase is a muscle specific enolase that is thought to be essential for proper development and differentiation of myocytes.

This antibody is routinely tested by western blot analysis. Other applications were tested at BD Biosciences Pharmingen during antibody development only or reported in the literature.



Western blot analysis of β-Enolase on a rat muscle lysate. *Lane 1: 1:500, lane 2: 1:1000, lane 3: 1:2000 dilution of the mouse anti- β-Enolase antibody.*

Preparation and Storage

The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography.
Store undiluted at -20° C.

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Application Notes

Application

Western blot	Routinely Tested
Immunofluorescence	Tested During Development

Recommended Assay Procedure:

Western blot: Please refer to http://www.bdbiosciences.com/pharmingen/protocols/Western_Blotting.shtml

Suggested Companion Products

Catalog Number	Name	Size	Clone
611469	Rat Muscle Lysate	500 µg	(none)
554002	HRP Goat Anti-Mouse Ig	1.0 ml	(none)
554001	FITC Goat Anti-Mouse Ig	0.5 mg	Polyclonal

Product Notices

1. Since applications vary, each investigator should titrate the reagent to obtain optimal results.
2. Please refer to www.bdbiosciences.com/pharmingen/protocols for technical protocols.
3. Source of all serum proteins is from USDA inspected abattoirs located in the United States.
4. Caution: Sodium azide yields highly toxic hydrazoic acid under acidic conditions. Dilute azide compounds in running water before discarding to avoid accumulation of potentially explosive deposits in plumbing.

References

Discher DJ, Bishopric NH, Wu X, Peterson CA, Webster KA. Hypoxia regulates beta-enolase and pyruvate kinase-M promoters by modulating Sp1/Sp3 binding to a conserved GC element. *J Biol Chem.* 1998; 273(40):26087-26093.(Biology)

Feo S, Antona V, Barbieri G, Passantino R, Cali L, Giallongo A. Transcription of the human beta enolase gene (ENO-3) is regulated by an intronic muscle-specific enhancer that binds myocyte-specific enhancer factor 2 proteins and ubiquitous G-rich-box binding factors. *Mol Biol Cell.* 1995; 15(11):5991-6002.(Biology)

Giallongo A, Venturella S, Oliva D, Barbieri G, Rubino P, Feo S. Structural features of the human gene for muscle-specific enolase. Differential splicing in the 5'-untranslated sequence generates two forms of mRNA. *Eur J Biochem.* 1993; 214(2):367-374.(Biology)