

Nicotinamide Nucleotide Transhydrogenase (NNT) Monoclonal Antibody














CATALOG #:	459170
COMPONENTS:	100 µg monoclonal antibody
APPLICATIONS:	Western blotting, immunocytochemistry
CLONE ID OF MONOCLONAL ANTIBODY (mAb):	8B4BB10
SPECIES CROSS-REACTIVITY:	human, bovine, mouse, rat
HOST SPECIES AND ISOTYPE:	Mouse IgG1
IMMUNOGEN:	human heart mitochondria
CONCENTRATION:	1 mg/mL in HEPES-Buffered Saline (HBS) with 0.02% Sodium Azide as a preservative.
SUGGESTED WORKING CONCENTRATION:	0.5 µg/mL for Western blotting
mAb PURITY:	Near homogeneity as judged by SDS-PAGE. The antibody was produced <i>in vitro</i> using hybridomas grown in serum-free medium, and then purified by biochemical fractionation.
STORAGE CONDITIONS:	Store at 4°C. Do not freeze.
COUNTRY OF ORIGIN:	USA

BACKGROUND:

Nicotinamide nucleotide transhydrogenase (NNT) is a mitochondrial inner membrane protein catalyzing the interconversion of NADH and NADPH within the matrix space of the organelle. It couples this reaction to proton translocation across the inner membrane. In the presence of an electrochemical proton gradient the production of NADPH is strongly favored. NADPH is required in the mitochondrial matrix to keep the ratio of GSH:GSSG high via the NADPH-dependent glutathione reductase. Thus NNT has an important role to play in defenses against oxidative stress produced by the organelle.

A novel, unexpected role of NNT is in insulin secretion. The absence of NNT prevents glucose from closing the K⁺ATP channel and from opening the Ca²⁺ channel in pancreatic beta cells. These defective beta cells also show a profound increase in ROS.

Explanation of symbols

Symbol	Description	Symbol	Description
	Catalogue Number		Batch code
	Research Use Only		<i>In vitro</i> diagnostic medical device
	Use by		Temperature limitation
	Manufacturer		European Community authorised representative
	Without, does not contain		With, contains
	Protect from light		Consult accompanying documents
	Directs the user to consult instructions for use (IFU), accompanying the product.		

For research use only. CAUTION: Not for human or animal therapeutic or diagnostic use.



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PI 459170

(Rev 06/10) DCC-10-1608

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