

Immunotag™ ND5 Polyclonal Antibody

Antibody Specification	
Catalog No.	ITT3001
Product Description	Immunotag™ ND5 Polyclonal Antibody
Size	50 µg, 100 µg
Conjugation	HRP, Biotin, FITC, Alexa Fluor® 350, Alexa Fluor® 405, Alexa Fluor® 488, Alexa Fluor® 555, Alexa Fluor® 594, Alexa Fluor® 647
IMPORTANT NOTE	This product is custom manufactured with a lead time of 3-4 weeks. Once in production, this item cannot be cancelled from an order and is not eligible for return.
Target Protein	ND5
Clonality	Polyclonal
Storage/Stability	-20°C/1 year
Application	WB,ELISA
Recommended Dilution	Western Blot: 1/500 - 1/2000. ELISA: 1/10000. Not yet tested in other applications.
Concentration	1 mg/ml
Reactive Species	Human
Host Species	Rabbit
Immunogen	The antiserum was produced against synthesized peptide derived from human MT-ND5. AA range:328-377
Specificity	ND5 Polyclonal Antibody detects endogenous levels of ND5 protein.
Purification	The antibody was affinity-purified from rabbit antiserum by affinity-chromatography using epitope-specific immunogen
Form	Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% sodium azide.
Gene Name	MT-ND5
Accession No.	P03915 P03921
Alternate Names	MT-ND5; MTND5; NADH5; ND5; NADH-ubiquinone oxidoreductase chain 5; NADH dehydrogenase subunit 5

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Description	catalytic activity:NADH + ubiquinone = NAD(+) + ubiquinol.,disease:Defects in MT-ND5 are a cause of complex I mitochondrial respiratory chain deficiency [MIM:252010]. Complex I (NADH-ubiquinone oxidoreductase), the largest complex of the mitochondrial respiratory chain, contains more than 40 subunits. It is embedded in the inner mitochondrial membrane and is partly protruding in the matrix. Complex I deficiency is the most common cause of mitochondrial disorders. It represents largely one-third of all cases of respiratory chain deficiency and is responsible for a variety of clinical symptoms, ranging from neurological disorders to cardiomyopathy, liver failure, and myopathy.,disease:Defects in MT-ND5 are a cause of Leber hereditary optic neuropathy (LHON) [MIM:535000]. LHON is a maternally inherited disease resulting in acute or subacute loss of central vision, due to optic nerve dysfunction. Cardiac conduction defects and neurological defects have also been described in some patients. LHON results from primary mitochondrial DNA mutations affecting the respiratory chain complexes.,disease:Defects in MT-ND5 are a cause of Leigh syndrome (LS) [MIM:256000]. LS is a severe neurological disorder characterized by bilaterally symmetrical necrotic lesions in subcortical brain regions.,disease:Defects in MT-ND5 are a cause of mitochondrial encephalomyopathy with lactic acidosis and stroke-like episodes syndrome (MELAS) [MIM:540000]. MELAS is a genetically heterogenous disorder, characterized by episodic vomiting, seizures, and recurrent cerebral insults resembling strokes and causing hemiparesis, hemianopsia, or cortical blindness.,disease:Defects in MT-ND5 are associated with features of myoclonic epilepsy associated with ragged-red fibers (MERRF) [MIM:545000]. MERRF is a mitochondrial encephalomyopathy characterized by myoclonic seizures. The prevalence in the general population of Europe has been estimated at 0.9 in 100'000 individuals, but the disease seems to be more common in the USA. Patients usually present during adolescence or early adulthood with myoclonic epilepsy, sometimes with neurosensory deafness, optic atrophy, short stature or peripheral neuropathy.,function:Core subunit of the mitochondrial membrane respiratory chain NADH dehydrogenase (Complex I) that is believed to belong to the minimal assembly required for catalysis. Complex I functions in the transfer of electrons from NADH to the respiratory chain. The immediate electron acceptor for the enzyme is believed to be ubiquinone.,similarity:Belongs to the complex I subunit 5 family.,
Cell Pathway/ Category	Oxidative phosphorylation,Parkinson's disease,
Protein Expression	Blood,Bone fossil,Bones,Breast cancer,Distant normal tissue,Glioma,
Subcellular Localization	mitochondrion,mitochondrial inner membrane,mitochondrial respiratory chain complex I,integral component of membrane,neuron projection,respiratory chain,

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Protein Function	catalytic activity:NADH + ubiquinone = NAD(+) + ubiquinol.,disease:Defects in MT-ND5 are a cause of complex I mitochondrial respiratory chain deficiency [MIM:252010]. Complex I (NADH-ubiquinone oxidoreductase), the largest complex of the mitochondrial respiratory chain, contains more than 40 subunits. It is embedded in the inner mitochondrial membrane and is partly protruding in the matrix. Complex I deficiency is the most common cause of mitochondrial disorders. It represents largely one-third of all cases of respiratory chain deficiency and is responsible for a variety of clinical symptoms, ranging from neurological disorders to cardiomyopathy, liver failure, and myopathy.,disease:Defects in MT-ND5 are a cause of Leber hereditary optic neuropathy (LHON) [MIM:535000]. LHON is a maternally inherited disease resulting in acute or subacute loss of central vision, due to optic nerve dysfunction. Cardiac conduction defects and neurological defects have also been described in some patients. LHON results from primary mitochondrial DNA mutations affecting the respiratory chain complexes.,disease:Defects in MT-ND5 are a cause of Leigh syndrome (LS) [MIM:256000]. LS is a severe neurological disorder characterized by bilaterally symmetrical necrotic lesions in subcortical brain regions.,disease:Defects in MT-ND5 are a cause of mitochondrial encephalomyopathy with lactic acidosis and stroke-like episodes syndrome (MELAS) [MIM:540000]. MELAS is a genetically heterogenous disorder, characterized by episodic vomiting, seizures, and recurrent cerebral insults resembling strokes and causing hemiparesis, hemianopsia, or cortical blindness.,disease:Defects in MT-ND5 are associated with features of myoclonic epilepsy associated with ragged-red fibers (MERRF) [MIM:545000]. MERRF is a mitochondrial encephalomyopathy characterized by myoclonic seizures. The prevalence in the general population of Europe has been estimated at 0.9 in 100'000 individuals, but the disease seems to be more common in the USA. Patients usually present during adolescence or early adulthood with myoclonic epilepsy, sometimes with neurosensory deafness, optic atrophy, short stature or peripheral neuropathy.,function:Core subunit of the mitochondrial membrane respiratory chain NADH dehydrogenase (Complex I) that is believed to belong to the minimal assembly required for catalysis. Complex I functions in the transfer of electrons from NADH to the respiratory chain. The immediate electron acceptor for the enzyme is believed to be ubiquinone.,similarity:Belongs to the complex I subunit 5 family.,
Usage	For Research Use Only! Not for diagnostic or therapeutic procedures.