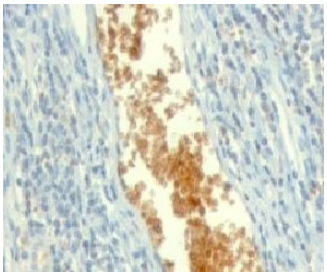
AMPD3 Antibody / Adenosine Monophosphate Deaminase 3 [clone ETAD3-1] (V7030)

Catalog No.	Formulation	Size
V7030-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	100 ug
V7030-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	20 ug
V7030SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug
V7030IHC-7ML	Prediluted in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide; *For IHC use only*	7 ml

Bulk quote request

Availability	1-3 business days
Species Reactivity	Human
Format	Purified
Host	Mouse
Clonality	Monoclonal (mouse origin)
Isotype	Mouse IgG2b, kappa
Clone Name	ETAD3-1
Purity	Protein G affinity chromatography
UniProt	Q01432
Localization	Cytoplasmic, membrane
Applications	Immunohistology (FFPE) : 2-4ug/ml for 30 min at RT (1) Prediluted IHC Only Format : incubate for 30 min at RT (2)
Limitations	This AMPD3 antibody is available for research use only.



Formalin-fixed, paraffin-embedded human tonsil stained with AMPD3 antibody (clone ETAD3-1).

Description

AMPD3 antibody detects AMP deaminase 3, an erythrocyte- and muscle-enriched enzyme involved in the conversion of adenosine monophosphate (AMP) to inosine monophosphate (IMP). The UniProt recommended name is AMP deaminase 3 (AMPD3). This enzyme participates in the purine nucleotide cycle, playing an essential role in maintaining energy homeostasis, especially in cells with high or fluctuating ATP demands.

Functionally, AMPD3 antibody recognizes a cytoplasmic enzyme that regulates adenine nucleotide levels by catalyzing the irreversible deamination of AMP. This reaction not only helps sustain ATP production during energy stress but also contributes to the control of purine degradation. AMPD3 is a homotetrameric protein whose activity is influenced by phosphate concentration, pH, and allosteric regulators including ADP and ATP. In erythrocytes, its function supports red blood cell stability and energy maintenance under hypoxic or anemic conditions.

The AMPD3 gene resides on chromosome 11p15.4 and expresses multiple isoforms that vary in length and tissue distribution. The enzyme is highly expressed in cardiac and skeletal muscle, as well as in mature erythrocytes, where it fine-tunes the balance between nucleotide synthesis and degradation. AMPD3 is a critical component of the metabolic adaptation to energy stress, linking purine turnover with oxygen availability and ATP regeneration.

Defects in AMPD3 activity are associated with inherited red cell metabolic abnormalities, including nonspherocytic hemolytic anemia and reduced exercise tolerance. Dysregulated AMP deaminase activity can alter cardiac bioenergetics, leading to impaired purine homeostasis and metabolic inefficiency. In research, AMPD3 antibody is valuable for investigating erythrocyte metabolism, purine enzymology, and cardiac energy regulation.

AMPD3 antibody is validated for use in relevant research applications to detect AMPD3 protein and study its role in energy metabolism and nucleotide turnover. NSJ Bioreagents provides AMPD3 antibody reagents optimized for metabolism, enzymology, and hematology studies.

Application Notes

Optimal dilution of the AMPD3 antibody should be determined by the researcher.

1. Staining of formalin-fixed tissues requires boiling tissue sections in 10mM Citrate buffer, pH 6.0, for 10-20 min followed by cooling at RT for 20 min
2. The prediluted format is supplied in a dropper bottle and is optimized for use in IHC. After epitope retrieval step (if required), drip mAb solution onto the tissue section and incubate at RT for 30 min.

Immunogen

Recombinant full-length human protein was used as the immunogen for the AMPD3 antibody.

Storage

Store the AMPD3 antibody at 2-8oC (with azide) or aliquot and store at -20oC or colder (without azide).