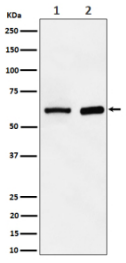
ATE1 Antibody / Arginyl transferase 1 [clone 30A62] (FY12687)

Catalog No.	Formulation	Size
FY12687	Rabbit IgG in phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol, 0.4-0.5mg/ml BSA	100 ul

Recombinant RABBIT MONOCLONAL

Bulk quote request

Availability	2-3 weeks
Species Reactivity	Human, Mouse, Rat
Format	Liquid
Host	Rabbit
Clonality	Recombinant Rabbit Monoclonal
Isotype	Rabbit IgG
Clone Name	30A62
Purity	Affinity-chromatography
Buffer	Rabbit IgG in phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol, 0.4-0.5mg/ml BSA.
UniProt	O95260
Applications	Western Blot : 1:500-1:2000 Immunohistochemistry : 1:50-1:200
Limitations	This ATE1 antibody is available for research use only.



Western blot analysis of ATE1 expression in (1) human HepG2 cell lysate; (2) mouse spleen lysate. Predicted molecular weight ~59 kDa.

Description

ATE1 antibody detects arginyl transferase 1, an enzyme encoded by the ATE1 gene. ATE1 catalyzes the post translational addition of arginine to the N terminus of proteins, a modification known as arginylation. This modification

regulates protein stability, localization, and function. Arginylation influences multiple biological processes including cytoskeletal organization, cardiovascular development, and stress responses.

ATE1 antibody is widely applied in protein modification research, developmental biology, and cell signaling. Arginylation is part of the N end rule pathway of protein degradation, where the identity of the N terminal residue determines protein half life. By detecting ATE1, researchers can study how this enzyme contributes to protein turnover, quality control, and cellular adaptation.

Western blotting with ATE1 antibody detects enzyme expression in heart, liver, and brain. Immunohistochemistry maps ATE1 in tissues undergoing development or stress, while immunofluorescence reveals cytoplasmic localization and associations with cytoskeletal structures. These applications provide valuable tools for understanding protein arginylation across biological systems.

ATE1 plays a critical role in cardiovascular biology. Knockout studies in mice demonstrate that ATE1 is essential for heart development and angiogenesis. Loss of arginylation disrupts actin filament organization and cellular migration. By applying ATE1 antibody, scientists can explore how arginylation shapes cardiovascular and developmental pathways.

In cell biology, ATE1 regulates actin and other cytoskeletal proteins, modulating cell adhesion and motility. Arginylation also affects metabolic enzymes and stress response proteins, linking ATE1 to adaptation under hypoxia or oxidative stress. Dysregulation of ATE1 has been associated with cancer progression, where altered protein stability influences tumor growth and metastasis. The antibody thus supports both basic and translational research.

ATE1 also contributes to neurological development and function. Arginylation of synaptic proteins influences plasticity and neuronal survival. This expands the relevance of ATE1 antibody to studies in neurobiology and neurodegenerative disease. Ongoing research highlights ATE1 as a potential therapeutic target for modulating protein stability and cellular adaptation.

ATE1 antibody from NSJ Bioreagents provides reliable specificity for analyzing arginyl transferase 1. Its strong performance ensures accurate detection of this enzyme in developmental, cancer, and neurobiological contexts.

Application Notes

Optimal dilution of the ATE1 antibody should be determined by the researcher.

Immunogen

A synthesized peptide derived from human ATE1 was used as the immunogen for the ATE1 antibody.

Storage

Store the ATE1 antibody at -20oC.