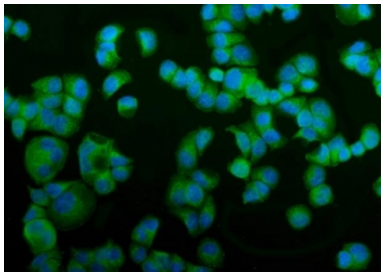
Vesicle-Fusing ATPase Antibody / N-Ethylmaleimide Sensitive Factor Antibody (RQ6355)

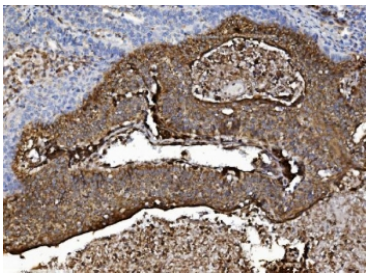
Catalog No.	Formulation	Size
RQ6355	0.5mg/ml if reconstituted with 0.2ml sterile DI water	100 ug

Bulk quote request

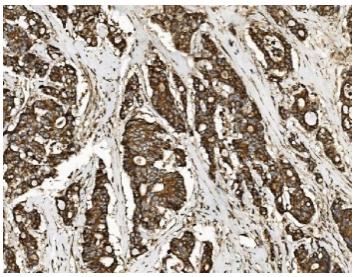
Availability	1-3 business days
Species Reactivity	Human, Mouse, Rat
Format	Purified
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Antigen affinity purified
Buffer	Lyophilized from 1X PBS with 2% Trehalose
UniProt	P46459
Localization	Cytoplasmic
Applications	Western blot: 0.5-1ug/ml Immunohistochemistry (FFPE): 2-5ug/ml Immunofluorescence (FFPE): 5ug/ml Flow cytometry: 1-3ug/million cells Direct ELISA: 0.1-0.5ug/ml
Limitations	This Vesicle-Fusing ATPase Antibody / N-Ethylmaleimide Sensitive Factor Antibody is available for research use only.



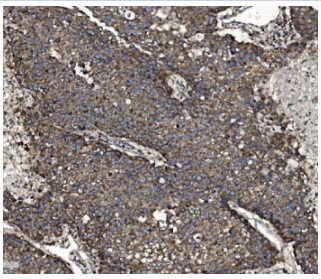
Vesicle-Fusing ATPase Antibody T-47D Cell IF. Immunofluorescent staining of FFPE human T-47D cells was performed with Vesicle-Fusing ATPase Antibody / N-Ethylmaleimide Sensitive Factor Antibody (green) following heat-induced epitope retrieval by steaming sections in pH6 citrate buffer for 20 minutes and DAPI nuclear counterstaining (blue). The image demonstrates diffuse cytoplasmic fluorescence with minimal nuclear staining, consistent with the intracellular localization of NSF in membrane trafficking pathways. This Vesicle-Fusing ATPase Antibody supports immunofluorescence studies of N-Ethylmaleimide Sensitive Factor, SNARE complex recycling, vesicle fusion, and intracellular transport.



Vesicle-Fusing ATPase Antibody Human Lung Cancer IHC. FFPE human lung cancer tissue was stained with Vesicle-Fusing ATPase Antibody / N-Ethylmaleimide Sensitive Factor Antibody following heat-induced epitope retrieval in pH8 EDTA buffer. The image demonstrates strong diffuse cytoplasmic staining throughout malignant epithelial cells with minimal background in the surrounding stromal tissue, consistent with the ubiquitous intracellular role of NSF in ATP-dependent membrane trafficking and SNARE complex recycling. This Vesicle-Fusing ATPase Antibody supports immunohistochemical studies of N-Ethylmaleimide Sensitive Factor, vesicle fusion, intracellular transport, and membrane trafficking in human cancers.



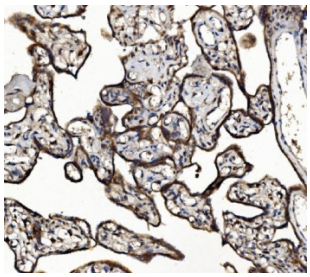
Vesicle-Fusing ATPase Antibody Human Colonic Adenocarcinoma IHC. FFPE human colonic adenocarcinoma tissue was stained with Vesicle-Fusing ATPase Antibody / N-Ethylmaleimide Sensitive Factor Antibody following heat-induced epitope retrieval in pH8 EDTA buffer. The image demonstrates strong diffuse cytoplasmic staining throughout malignant glandular epithelial cells with minimal background in the surrounding stromal tissue, consistent with the widespread intracellular expression of NSF and its role in ATP-dependent membrane trafficking. This Vesicle-Fusing ATPase Antibody supports immunohistochemical studies of N-Ethylmaleimide Sensitive Factor, SNARE complex recycling, vesicle fusion, intracellular transport, and cancer biology.



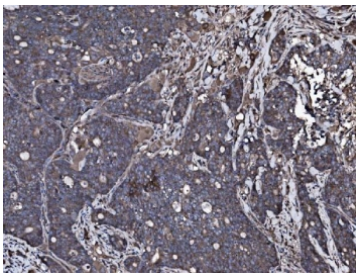
Vesicle-Fusing ATPase Antibody Human Liver Cancer IHC. FFPE human liver cancer tissue was stained with Vesicle-Fusing ATPase Antibody / N-Ethylmaleimide Sensitive Factor Antibody following heat-induced epitope retrieval in pH8 EDTA buffer. The image demonstrates strong diffuse cytoplasmic staining throughout malignant hepatocellular tumor cells with minimal background in the surrounding stromal tissue, consistent with the ubiquitous intracellular localization of NSF and its essential role in ATP-dependent membrane trafficking. This Vesicle-Fusing ATPase Antibody supports immunohistochemical studies of N-Ethylmaleimide Sensitive Factor, SNARE complex recycling, vesicle fusion, intracellular transport, and cancer biology.



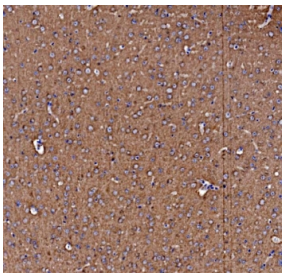
Vesicle-Fusing ATPase Antibody Human Renal Clear Cell Carcinoma IHC. FFPE human renal clear cell carcinoma tissue was stained with Vesicle-Fusing ATPase Antibody / N-Ethylmaleimide Sensitive Factor Antibody following heat-induced epitope retrieval in pH8 EDTA buffer. The image demonstrates strong diffuse cytoplasmic staining throughout malignant renal epithelial cells with minimal background staining, consistent with the broad intracellular distribution of NSF and its fundamental role in ATP-dependent membrane trafficking and SNARE complex recycling. This Vesicle-Fusing ATPase Antibody supports immunohistochemical studies of N-Ethylmaleimide Sensitive Factor, vesicle fusion, intracellular transport, membrane trafficking, and renal cancer biology.



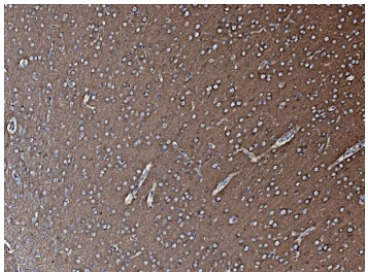
Vesicle-Fusing ATPase Antibody Human Placenta IHC. FFPE human placental tissue was stained with Vesicle-Fusing ATPase Antibody / N-Ethylmaleimide Sensitive Factor Antibody following heat-induced epitope retrieval in pH8 EDTA buffer. The image demonstrates moderate to strong predominantly membranous and cytoplasmic staining of trophoblastic cells with minimal background staining, consistent with the widespread expression of NSF in highly secretory tissues that depend on efficient intracellular membrane trafficking. This Vesicle-Fusing ATPase Antibody supports immunohistochemical studies of N-Ethylmaleimide Sensitive Factor, SNARE complex recycling, vesicle fusion, intracellular transport, and placental biology.



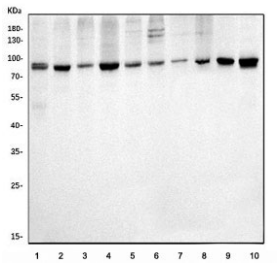
Vesicle-Fusing ATPase Antibody Human Gallbladder Adenocarcinoma IHC. FFPE human gallbladder adenocarcinoma tissue was stained with Vesicle-Fusing ATPase Antibody / N-Ethylmaleimide Sensitive Factor Antibody following heat-induced epitope retrieval in pH8 EDTA buffer. The image demonstrates moderate to strong diffuse cytoplasmic staining throughout malignant glandular epithelial cells with minimal background in the surrounding stromal tissue, consistent with the broad intracellular expression of NSF and its central role in ATP-dependent membrane trafficking. This Vesicle-Fusing ATPase Antibody supports immunohistochemical studies of N-Ethylmaleimide Sensitive Factor, SNARE complex recycling, vesicle fusion, intracellular transport, and hepatobiliary cancer biology.



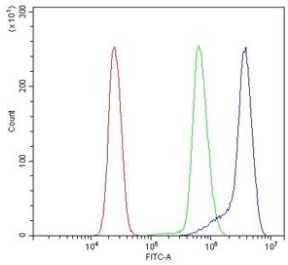
Vesicle-Fusing ATPase Antibody Mouse Brain IHC. FFPE mouse brain tissue was stained with Vesicle-Fusing ATPase Antibody / N-Ethylmaleimide Sensitive Factor Antibody following heat-induced epitope retrieval in pH8 EDTA buffer. The image demonstrates widespread moderate to strong cytoplasmic staining throughout neuronal cell bodies and neuropil with minimal background staining, consistent with the abundant expression of NSF in the central nervous system where it drives ATP-dependent SNARE complex recycling and synaptic vesicle trafficking. This Vesicle-Fusing ATPase Antibody supports immunohistochemical studies of N-Ethylmaleimide Sensitive Factor, membrane trafficking, vesicle fusion, intracellular transport, and neurobiology.



Vesicle-Fusing ATPase Antibody Rat Brain IHC. FFPE rat brain tissue was stained with Vesicle-Fusing ATPase Antibody / N-Ethylmaleimide Sensitive Factor Antibody following heat-induced epitope retrieval in pH8 EDTA buffer. The image demonstrates widespread moderate to strong cytoplasmic staining throughout neuronal cell bodies and neuropil with minimal background staining, consistent with the abundant expression of NSF in the central nervous system and its essential role in ATP-dependent SNARE complex recycling. This Vesicle-Fusing ATPase Antibody supports immunohistochemical studies of N-Ethylmaleimide Sensitive Factor, vesicle fusion, intracellular membrane trafficking, synaptic vesicle recycling, and neurobiology.



Vesicle-Fusing ATPase Antibody Human, Rat and Mouse WB. Western blot testing of Vesicle-Fusing ATPase Antibody / N-Ethylmaleimide Sensitive Factor Antibody detected a prominent band at approximately 82 kDa, consistent with the predicted molecular weight of NSF. Lanes: (1) human placenta, (2) human K562, (3) human A549, (4) human MCF7, (5) human U-2 OS, (6) human SW620, (7) human 22RV1, (8) human HepG2, (9) rat brain, and (10) mouse brain lysates. Robust immunoreactive bands are observed across all human and rodent samples, demonstrating broad cross-species recognition of endogenous NSF, with strongest expression evident in brain tissue, consistent with its essential role in ATP-dependent SNARE complex recycling and synaptic vesicle trafficking. This Vesicle-Fusing ATPase Antibody supports western blot studies of N-Ethylmaleimide Sensitive Factor, membrane trafficking, vesicle fusion, intracellular transport, and neurobiology.



Vesicle-Fusing ATPase Antibody U937 Cell FACS. Flow cytometry analysis of human U937 cells was performed using Vesicle-Fusing ATPase Antibody / N-Ethylmaleimide Sensitive Factor Antibody at 1 ug/million cells following blocking with goat sera. Red represents unstained cells, green the isotype control, and blue the antibody-stained population. The marked rightward shift of the blue histogram relative to the isotype control demonstrates specific detection of endogenous NSF in U937 cells. This Vesicle-Fusing ATPase Antibody supports flow cytometric studies of N-Ethylmaleimide Sensitive Factor, membrane trafficking, vesicle fusion, and intracellular transport.

Description

Vesicle-Fusing ATPase Antibody / N-Ethylmaleimide Sensitive Factor Antibody recognizes NSF, a highly conserved AAA ATPase that provides the energy required for ATP-dependent recycling of SNARE protein complexes following membrane fusion. By disassembling cis-SNARE complexes after vesicles fuse with their target membranes, NSF restores individual SNARE proteins to a fusion-competent state, allowing repeated rounds of intracellular membrane trafficking. This essential recycling mechanism supports normal secretion, endocytosis, receptor recycling, organelle maintenance, and membrane homeostasis throughout eukaryotic cells.

NSF functions together with soluble NSF attachment proteins (SNAPs), which recruit the ATPase to assembled SNARE complexes. ATP hydrolysis then generates the mechanical force necessary to separate tightly associated SNARE proteins, permitting subsequent cycles of vesicle docking and fusion. Through this activity, NSF regulates Golgi transport, endosomal trafficking, lysosomal function, constitutive secretion, regulated exocytosis, and synaptic vesicle recycling. Because these processes occur in virtually every cell type, NSF is broadly expressed throughout mammalian tissues, with particularly high levels in the nervous system where rapid neurotransmitter release depends on efficient SNARE recycling.

Abnormal NSF function has been associated with impaired membrane trafficking, defective protein secretion, altered receptor recycling, neurodegenerative disorders, and disrupted synaptic transmission. NSF is also increasingly investigated in studies of cancer biology, autophagy, intracellular pathogen biology, and vesicle-mediated signaling. Continued research is expanding understanding of how ATP-driven SNARE complex remodeling maintains intracellular organization, organelle communication, and cellular homeostasis.

A Vesicle-Fusing ATPase Antibody is a valuable reagent for detecting endogenous NSF by western blotting, immunohistochemistry, immunofluorescence, flow cytometry, immunoprecipitation, and related laboratory applications. A N-Ethylmaleimide Sensitive Factor Antibody supports investigations of membrane trafficking, SNARE complex recycling, vesicle fusion, intracellular transport, and neuronal function.

For additional information about NSF biology, ATP-dependent membrane trafficking, SNARE complex recycling, and the full research applications of this target, see our NSF Antibody / Vesicle-Fusing ATPase Antibody page.

Application Notes

Optimal dilution of the Vesicle-Fusing ATPase Antibody / N-Ethylmaleimide Sensitive Factor Antibody should be determined by the researcher.

Immunogen

Recombinant human protein (amino acids R4-Q636) was used as the immunogen for the Vesicle-fusing ATPase antibody.

Storage

After reconstitution, the Vesicle-fusing ATPase antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.

Alternate Names

Vesicle-Fusing ATPase antibody, N-Ethylmaleimide Sensitive Factor antibody, NSF antibody, NEM-Sensitive Fusion Protein antibody

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