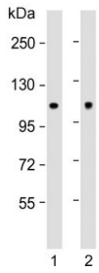
Hexokinase Antibody / Hexokinase-A Antibody (F54454)

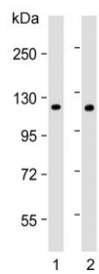
Catalog No.	Formulation	Size
F54454-0.4ML	In 1X PBS, pH 7.4, with 0.09% sodium azide	0.4 ml
F54454-0.08ML	In 1X PBS, pH 7.4, with 0.09% sodium azide	0.08 ml

Bulk quote request

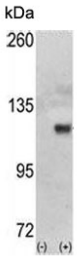
Availability	1-3 business days
Species Reactivity	Human, Rat
Format	Purified
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit Ig
Purity	Antigen affinity purified
UniProt	P19367
Applications	Western blot: 1:500-1:2000 Immunohistochemistry (FFPE): 1:25
Limitations	This Hexokinase Antibody / Hexokinase-A Antibody is available for research use only.



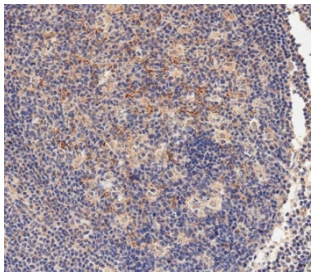
Hexokinase Antibody in Human MCF7 Cells and Rat Brain WB. Western blot testing of Hexokinase Antibody / Hexokinase-A Antibody in 1) human MCF7 breast cancer cell lysate and 2) rat brain lysate. A strong, discrete HK1 band is observed at approximately 102 kDa in both samples, consistent with the predicted molecular weight of ~102 kDa.



Hexokinase Antibody in Rat C2C12 Cells and Brain WB. Western blot testing of Hexokinase Antibody / Hexokinase-A Antibody in 1) rat C2C12 cell lysate and 2) rat brain lysate. A strong, discrete HK1 band is observed at approximately 102 kDa in both samples, consistent with the predicted molecular weight of ~102 kDa.



Hexokinase Antibody in HK1-Transfected 293 Cells WB. Western blot testing of Hexokinase Antibody / Hexokinase-A Antibody in 1) non-transfected and 2) HK1-transfected 293 cell lysates. A strong band at approximately 102 kDa is detected in the HK1-transfected sample, while little to no corresponding signal is visible in the non-transfected control, supporting target-specific detection of HK1.



Hexokinase Antibody in Human Tonsil IHC. Immunohistochemistry testing of Hexokinase Antibody / Hexokinase-A Antibody in FFPE human tonsil tissue. HIER was performed by steaming tissue sections in pH 6 citrate buffer for 20 min followed by cooling before staining. HK1 immunoreactivity is observed predominantly in the cytoplasm of cells distributed throughout the tonsillar tissue.

Description

Hexokinase Antibody / Hexokinase-A Antibody recognizes hexokinase-1, an ATP-dependent glucose kinase encoded by the HK1 gene. Hexokinase-1 catalyzes the phosphorylation of glucose to glucose-6-phosphate, an important initial step in cellular glucose utilization. This reaction traps glucose within the cell and generates an intermediate that can be directed into glycolysis, glycogen synthesis or the pentose phosphate pathway. Through this activity, HK1 plays a central role in glucose metabolism and cellular energy regulation.

Hexokinase-1, also historically called Hexokinase-A and Hexokinase Type I, is an approximately 102 kDa member of the mammalian hexokinase family. The protein consists of homologous N- and C-terminal domains that arose through an ancestral gene duplication. The C-terminal domain contains the principal catalytic activity, while the N-terminal region contributes regulatory functions. HK1 is subject to feedback inhibition by glucose-6-phosphate, helping coordinate the rate of glucose phosphorylation with cellular metabolic requirements.

A defining characteristic of HK1 is its association with the outer mitochondrial membrane. An N-terminal mitochondrial-binding region mediates interaction with voltage-dependent anion channels, positioning the enzyme near mitochondrially generated ATP. This arrangement provides a direct functional connection between glucose phosphorylation and mitochondrial energy production. Mitochondrial association of HK1 has also been studied in relation to membrane integrity, metabolic adaptation, cellular stress and apoptosis, connecting glucose metabolism with mechanisms involved in cell survival.

Alternative splicing of HK1 generates multiple transcript variants, including forms with distinct N-terminal sequences and tissue-associated expression patterns. Pathogenic variants affecting HK1 have been associated with hexokinase deficiency and nonspherocytic hemolytic anemia, while other alterations are linked to neurological and developmental disorders. HK1 is therefore relevant to research involving glycolysis, mitochondrial physiology, metabolic regulation and disease-associated changes in cellular bioenergetics.

This rabbit polyclonal antibody was generated against a peptide derived from a portion of amino acids 78-108 of human HK1 and is antigen affinity purified. NSJ Bioreagents provides this Hexokinase Antibody for research into HK1 biology, glucose metabolism and cellular energy regulation. A Hexokinase-A Antibody can support investigation of the molecular mechanisms connecting glucose phosphorylation with mitochondrial metabolism and cellular energy homeostasis.

For additional information on hexokinase-1 biology and complementary antibody validation, visit our HK1 Antibody 4B7 / Glycolysis Enzyme Antibody page.

Application Notes

The stated application concentrations are suggested starting points. Titration of the Hexokinase Antibody / Hexokinase-A Antibody may be required due to differences in protocols and secondary/substrate sensitivity.

Immunogen

A portion of amino acids 78-108 from the human protein was used as the immunogen for the Hexokinase antibody.

Storage

Aliquot the Hexokinase antibody and store frozen at -20oC or colder. Avoid repeated freeze-thaw cycles.

Alternate Names

Hexokinase antibody, Hexokinase-A antibody, HK1 antibody, Hexokinase 1 antibody, Hexokinase I antibody

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