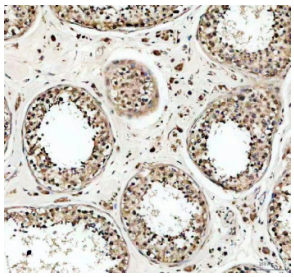
USP5 Antibody / Ubiquitin carboxyl-terminal hydrolase 5 (RQ8934)

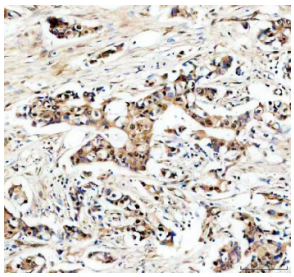
Catalog No.	Formulation	Size
RQ8934	0.5mg/ml if reconstituted with 0.2ml sterile DI water	100 ug

Bulk quote request

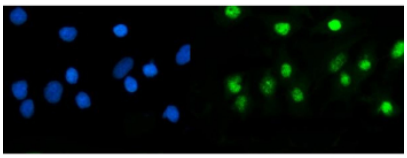
Availability	1-2 business days
Species Reactivity	Human, Mouse, Rat
Format	Antigen affinity purified
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Antigen affinity purified
Buffer	Lyophilized from 1X PBS with 2% Trehalose
UniProt	P45974
Localization	Nucleus, Cytoplasm
Applications	Western Blot : 1-2ug/ml Immunohistochemistry (FFPE) : 2-5ug/ml ELISA : 0.1-0.5ug/ml Immunofluorescence : 5ug/ml Flow Cytometry : 1-3ug/million cells
Limitations	This USP5 antibody is available for research use only.



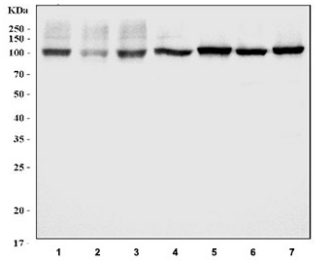
IHC staining of FFPE human testis tissue with USP5 antibody, HRP-secondary and DAB substrate. HIER: boil tissue sections in pH8 EDTA for 20 min and allow to cool before testing.



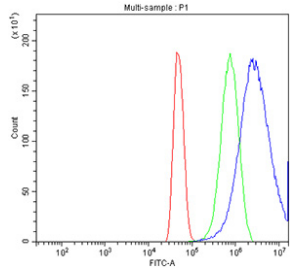
IHC staining of FFPE human breast cancer tissue with USP5 antibody, HRP-secondary and DAB substrate. HIER: boil tissue sections in pH8 EDTA for 20 min and allow to cool before testing.



Immunofluorescent staining of FFPE human A549 cells with USP5 antibody (green) and DAPI nuclear stain (blue). HIER: steam section in pH6 citrate buffer for 20 min.



Western blot testing of 1) human A549, 2) human U-2 OS, 3) human MDA-MB-453, 4) human MCF7, 5) rat brain, 6) rat testis and 7) mouse brain tissue lysate with USP5 antibody. Predicted molecular weight ~96 kDa.



Flow cytometry testing of fixed and permeabilized human U-251 cells with USP5 antibody at 1ug/million cells (blocked with goat sera); Red=cells alone, Green=isotype control, Blue= USP5 antibody.

Description

USP5 (Ubiquitin carboxyl-terminal hydrolase 5) is a member of the deubiquitinating enzyme (DUB) family, which plays a central role in regulating protein stability and turnover by processing ubiquitin chains. USP5 specifically disassembles unanchored polyubiquitin chains into monoubiquitin, maintaining a sufficient pool of free ubiquitin necessary for cellular homeostasis. A USP5 antibody is widely used to study protein degradation, ubiquitin recycling, and regulatory pathways involving the proteasome.

USP5, sometimes referred to as Isopeptidase T, functions in close connection with the ubiquitin-proteasome system, a critical mechanism for protein quality control. By hydrolyzing ubiquitin linkages, it prevents the accumulation of free polyubiquitin chains, which could otherwise interfere with proteasomal activity. Using a USP5 antibody enables researchers to evaluate its expression patterns, subcellular localization, and functional involvement in ubiquitin dynamics.

Dysregulation of USP5 has been linked to several disease processes. Elevated USP5 expression has been associated with tumor progression in cancers such as glioblastoma, colorectal cancer, and pancreatic cancer, where it contributes to cell proliferation and survival. It has also been implicated in neurological disorders due to its role in protein turnover, highlighting its importance in both health and disease. Investigating these roles with a USP5 antibody provides valuable insights into its potential as a biomarker or therapeutic target.

NSJ Bioreagents offers a high-quality USP5 antibody validated for applications including western blot, immunohistochemistry, and immunofluorescence. Selecting a USP5 antibody from NSJ Bioreagents ensures reliable results and reproducibility in studies focused on the ubiquitin-proteasome pathway, cancer biology, and protein regulation.

Application Notes

Optimal dilution of the USP5 antibody should be determined by the researcher.

Immunogen

Amino acids M1-K800 from the human protein were used as the immunogen for the USP5 antibody.

Storage

After reconstitution, the USP5 antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.