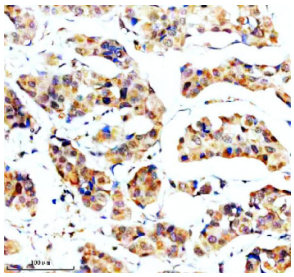
SORL1 Antibody / Sortilin-related receptor / SORLA (FY12181)

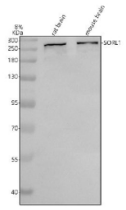
Catalog No.	Formulation	Size
FY12181	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml	100 ug

Bulk quote request

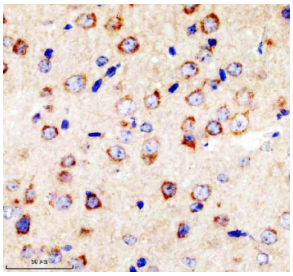
Availability	1-2 days
Species Reactivity	Human, Mouse, Rat
Format	Lyophilized
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Immunogen affinity purified
Buffer	Each vial contains 4 mg Trehalose, 0.9 mg NaCl, 0.2 mg Na2HPO4.
UniProt	Q92673
Applications	Western Blot : 0.25-0.5ug/ml Immunohistochemistry : 2-5ug/ml Immunofluorescence : 5ug/ml Flow Cytometry : 1-3ug/million cells ELISA : 0.1-0.5ug/ml
Limitations	This SORL1 antibody is available for research use only.



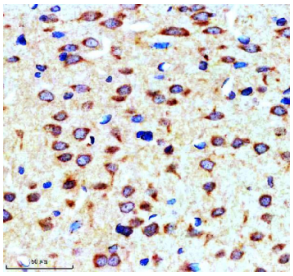
SORL1 Antibody Human Breast Cancer IHC. Immunohistochemical staining of FFPE human breast cancer tissue with SORL1 antibody demonstrated moderate cytoplasmic and membranous staining in malignant epithelial cells. SORL1 (Sortilin-Related Receptor 1) is a VPS10-domain sorting receptor that regulates intracellular protein trafficking, endosomal sorting, and receptor recycling to maintain cellular protein homeostasis. Altered SORL1 expression has been associated with neurodegenerative disease and several human cancers. These results support the utility of SORL1 Antibody for studies of intracellular trafficking, endosomal biology, receptor sorting, and cancer. Heat-mediated antigen retrieval was performed in pH 8.0 EDTA buffer, followed by overnight incubation with SORL1 antibody at 2 ug/ml. Detection was achieved using an HRP-conjugated secondary antibody and DAB substrate.



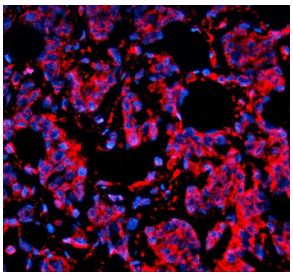
SORL1 Antibody Rat and Mouse Brain WB. Western blot analysis of SORL1 expression was performed using anti-SORL1 antibody. Lane 1: rat brain tissue lysate. Lane 2: mouse brain tissue lysate. SORL1 (Sortilin-Related Receptor 1) is a VPS10-domain sorting receptor that regulates intracellular protein trafficking, endosomal sorting, and receptor recycling, particularly within neurons where it controls amyloid precursor protein (APP) trafficking. A specific immunoreactive band is detected at approximately 250 kDa, consistent with the predicted molecular weight of SORL1 (~248 kDa). These results demonstrate cross-species reactivity and support the utility of SORL1 Antibody for studies of neuronal protein trafficking, endosomal biology, neurodegeneration, and Alzheimer's disease research.



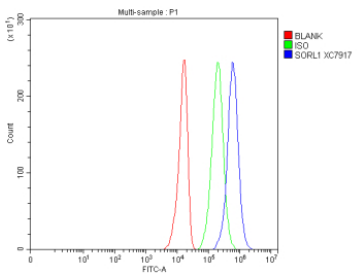
SORL1 Antibody Mouse Brain IHC. Immunohistochemical staining of FFPE mouse brain tissue with SORL1 antibody demonstrated moderate cytoplasmic and membranous staining in neuronal cells, consistent with the localization of SORL1 (Sortilin-Related Receptor 1), a VPS10-domain sorting receptor that regulates intracellular protein trafficking, endosomal sorting, and receptor recycling. SORL1 plays a critical role in neuronal protein homeostasis by directing amyloid precursor protein (APP) trafficking, making it an important marker in Alzheimer's disease and neurodegeneration research. Heat-mediated antigen retrieval was performed in pH 8.0 EDTA buffer, followed by overnight incubation with SORL1 antibody at 2 ug/ml. Detection was achieved using an HRP-conjugated secondary antibody and DAB substrate.



SORL1 Antibody Rat Brain IHC. Immunohistochemical staining of FFPE rat brain tissue with SORL1 antibody demonstrated moderate cytoplasmic and membranous staining in neuronal cells, consistent with the localization of SORL1 (Sortilin-Related Receptor 1), a VPS10-domain sorting receptor that regulates intracellular protein trafficking, endosomal sorting, and receptor recycling. SORL1 is a key regulator of amyloid precursor protein (APP) trafficking and neuronal protein homeostasis, making it an important marker in Alzheimer's disease and neurodegeneration research. Heat-mediated antigen retrieval was performed in pH 8.0 EDTA buffer, followed by overnight incubation with SORL1 antibody at 2 ug/ml. Detection was achieved using an HRP-conjugated secondary antibody and DAB substrate.



SORL1 Antibody Human Breast Cancer IF. Immunofluorescent staining of FFPE human breast cancer tissue with SORL1 antibody (red) demonstrated prominent cytoplasmic and membranous localization in malignant epithelial cells. SORL1 (Sortilin-Related Receptor 1) is a VPS10-domain sorting receptor that regulates intracellular protein trafficking, endosomal sorting, and receptor recycling, thereby maintaining cellular protein homeostasis. Altered SORL1 expression has been implicated in neurodegenerative disorders and several human cancers. Nuclei were counterstained with DAPI (blue). Heat-mediated antigen retrieval was performed in pH 8.0 EDTA buffer, followed by overnight incubation with SORL1 antibody at 5 ug/ml and detection using Cy3-conjugated goat anti-rabbit IgG.



SORL1 Antibody Human U251 Flow Cytometry. Flow cytometric analysis of human U251 cells using SORL1 antibody demonstrated a clear rightward shift in fluorescence intensity (blue) compared with the isotype control (green) and unstained cells (red), indicating specific detection of SORL1 expression. SORL1 (Sortilin-Related Receptor 1) is a VPS10-domain sorting receptor that regulates intracellular protein trafficking, endosomal sorting, and receptor recycling. U251 cells were fixed with 4% paraformaldehyde, blocked with normal goat serum, and incubated with SORL1 antibody at 1 ug/million cells, followed by DyLight 488-conjugated secondary antibody detection. These results support the utility of SORL1 Antibody for flow cytometric studies of intracellular trafficking, receptor sorting, and neurobiology.

Description

SORL1 antibody detects Sortilin-related receptor, encoded by the SORL1 gene on chromosome 11q23.3. SORL1 antibody is widely used in research on protein trafficking, Alzheimer's disease, and neurodegeneration. Also known as SORLA, SORL1 belongs to the VPS10 domain receptor family, which regulates intracellular sorting of cargo proteins. SORL1 is highly expressed in neurons, adipose tissue, and liver, where it directs trafficking of lipoproteins, growth factors, and amyloid precursor protein (APP). Its ability to regulate APP processing makes it central to Alzheimer's disease biology.

Structurally, SORL1 is a large type I transmembrane receptor with an extracellular VPS10 domain, LDL receptor repeats, EGF repeats, and fibronectin-type domains. These motifs mediate binding to diverse ligands, including APP, ApoE, and neurotrophic factors. The cytoplasmic tail contains sorting signals that interact with adaptor proteins, ensuring proper endocytic recycling and lysosomal targeting. This modular design allows SORL1 to function as a key regulator of protein trafficking in neurons and other cells.

Functionally, SORL1 reduces amyloidogenic processing of APP by directing it toward recycling pathways rather than amyloidogenic cleavage in endosomes. This protective role against amyloid beta accumulation makes SORL1 central in Alzheimer's disease research. SORL1 also regulates lipoprotein metabolism, endocytosis of growth factors, and intracellular signaling pathways. Knockdown or mutation of SORL1 leads to increased amyloidogenic APP processing, impaired synaptic function, and altered lipid homeostasis. Researchers use SORL1 antibody to study these trafficking and signaling mechanisms.

Clinically, SORL1 mutations and polymorphisms are strongly associated with Alzheimer's disease risk. Reduced expression of SORL1 correlates with increased amyloid plaque burden in patient brains. Beyond Alzheimer's, SORL1 variants are linked to obesity, cardiovascular disease, and psychiatric disorders. SORL1 also has implications in cancer biology, where altered trafficking influences signaling pathways. NSJ Bioreagents provides SORL1 antibody to support research in neurodegeneration, metabolism, and receptor trafficking.

Experimentally, SORL1 antibody is used in western blotting to detect the ~250 kDa protein, in immunofluorescence microscopy to analyze intracellular trafficking, and in immunohistochemistry to study brain tissue expression. Immunoprecipitation with SORL1 antibody reveals APP-SORL1 complexes and trafficking networks.

Explore our Cell Biology Antibodies page to learn more about proteins involved in intracellular trafficking, endosomal sorting, and receptor recycling.

Application Notes

Optimal dilution of the SORL1 antibody should be determined by the researcher.

Immunogen

E.coli-derived human SORLA/SORL1 recombinant protein (Position: D282-K708) was used as the immunogen for the SORL1 antibody.

Storage

After reconstitution, the SORL1 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

Sorting protein-related receptor containing LDLR class A repeats antibody, SorLA antibody, SORL1 antibody