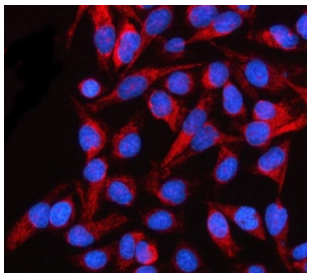
SLC38A9 Antibody / URLC11 (RQ8571)

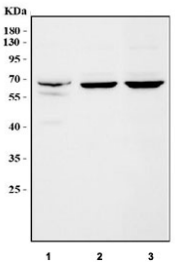
Catalog No.	Formulation	Size
RQ8571	0.5mg/ml if reconstituted with 0.2ml sterile DI water	100 ug

Bulk quote request

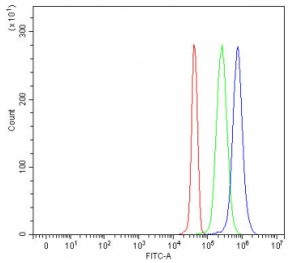
Availability	1-3 days
Species Reactivity	Human, Mouse, Rat
Format	Antigen affinity purified
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Antigen affinity purified
Buffer	Lyophilized from 1X PBS with 2% Trehalose
UniProt	Q8NBW4
Localization	Cytoplasm
Applications	Western Blot : 0.5-1ug/ml Immunofluorescence : 5ug/ml Flow Cytometry : 1-3ug/million cells ELISA : 0.1-0.5ug/ml
Limitations	This SLC38A9 antibody is available for research use only.



Immunofluorescent staining of FFPE human HeLa cells with SLC38A9 antibody (red) and DAPI nuclear stain (blue). HIER: steam section in pH6 citrate buffer for 20 min.



Western blot testing of 1) human HaCat, 2) rat liver and 3) mouse liver tissue lysate with SLC38A9 antibody. Predicted molecular weight: 53-64 kDa (multiple isoforms).



Flow cytometry testing of fixed and permeabilized human JK cells with SLC38A9 antibody at 1ug/million cells (blocked with goat sera); Red=cells alone, Green=isotype control, Blue= SLC38A9 antibody.

Description

Solute carrier family 38 member 9 is a protein that in humans is encoded by the SLC38A9 gene. Sodium-coupled neutral amino acid transporter 9 (SLC38A9) is a lysosomal amino acid transporter, involved in the regulation of mechanistic target of rapamycin complex 1 (mTORC1) activity in response to amino acid levels within the lysosomal lumen. A sodium-couple amino acid transporter at the lysosome, SLC38A9, senses arginine from within the lysosome to convey arginine sufficiency to mTORC1. SLC38A9 forms a complex with other lysosomal resident proteins including the v-ATPase and a pentameric complex called Ragulator. v-ATPase function is necessary for mTORC1 activation, but the molecular mechanism of this regulation is currently unclear2. Ragulator binds strongly to the Rag GTPases and was shown to function as a guanine exchange factor (GEF) for RagA/B. Potentially SLC38A9 and the v-ATPase are able to regulate mTORC1 activity by modulating Ragulatorï¿½s GEF activity. RagA/B is not the only Rag GTPase that is regulated, but a Folliculin-FNIP2 complex is a GAP for RagC/D. In short, SLC38A9 is a functional component of the lysosomal amino acid sensing machinery involved in the control of mTORC1 activity, that underlies the regulation of the metabolic status and cellular responses to growth factors, energy, glucose and amino acid levels.

Application Notes

Optimal dilution of the SLC38A9 antibody should be determined by the researcher.

Immunogen

An E.coli-derived human recombinant protein (amino acids D33-Q450) was used as the immunogen for the SLC38A9 antibody.

Storage

After reconstitution, the SLC38A9 antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.