

SAR1A / SAR1 Antibody (Internal)
Goat Polyclonal Antibody
Catalog # ALS13436**Specification**

SAR1A / SAR1 Antibody (Internal) - Product Information

Application	WB, IHC-P, E
Primary Accession	Q9NR31
Reactivity	Human
Host	Goat
Clonality	Polyclonal
Calculated MW	22kDa KDa
Dilution	WB~~1:1000 IHC-P~~N/A E~~N/A

SAR1A / SAR1 Antibody (Internal) - Additional Information**Gene ID** 56681**Other Names**

GTP-binding protein SAR1a, COPII-associated small GTPase, SAR1A, SAR1, SARA, SARA1

Target/Specificity

Human SAR1A.

Reconstitution & Storage

Store at -20°C. Minimize freezing and thawing.

Precautions

SAR1A / SAR1 Antibody (Internal) is for research use only and not for use in diagnostic or therapeutic procedures.

SAR1A / SAR1 Antibody (Internal) - Protein Information**Name** SAR1A ([HGNC:10534](#))**Synonyms** SAR1, SARA, SARA1**Function**

Small GTPase that cycles between an active GTP-bound and an inactive GDP-bound state and mainly functions in vesicle-mediated endoplasmic reticulum (ER) to Golgi transport. The active GTP-bound form inserts into the endoplasmic reticulum membrane where it recruits the remainder of the coat protein complex II/COPII. The coat protein complex II assembling and polymerizing on endoplasmic reticulum membrane is responsible for both the sorting of cargos and the deformation and budding of membranes into vesicles destined to the Golgi (PubMed:23433038, PubMed:32358066, PubMed:32358066).

[36369712](http://www.uniprot.org/citations/36369712)). The GTPase activity of SAR1 by controlling the timing of COPII budding regulates the size of the formed vesicles and is important for cargo selection depending on their size (PubMed:[32358066](http://www.uniprot.org/citations/32358066)). Together with SEC16A, forms the organized scaffold defining endoplasmic reticulum exit sites (ERES), some specific domains of the endoplasmic reticulum where COPII vesicles form (PubMed:[17005010](http://www.uniprot.org/citations/17005010)). In addition to its role in vesicle trafficking, can also function as a leucine sensor regulating TORC1 signaling and more indirectly cellular metabolism, growth and survival. In absence of leucine, interacts with the GATOR2 complex via MIOS and inhibits TORC1 signaling. The binding of leucine abrogates the interaction with GATOR2 and the inhibition of the TORC1 signaling. This function is completely independent of the GTPase activity of SAR1B (PubMed:[34290409](http://www.uniprot.org/citations/34290409)).

Cellular Location

Endoplasmic reticulum membrane; Peripheral membrane protein. Golgi apparatus, Golgi stack membrane; Peripheral membrane protein. Cytoplasm, cytosol. Lysosome membrane. Note=Active at endoplasmic reticulum exit sites (ERES) where it inserts into the membrane and recruits the remainder of the coat protein complex II/COPII (PubMed:23433038, PubMed:32358066). Upon leucine deprivation, associates with lysosomal membranes to repress TORC1 signaling (Probable)

SAR1A / SAR1 Antibody (Internal) - Protocols

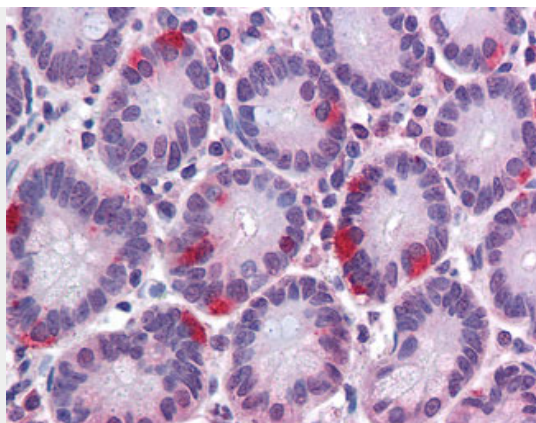
Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

SAR1A / SAR1 Antibody (Internal) - Images



Antibody (0.1 ug/ml) staining of NIH3T3 lysate (35 ug protein in RIPA buffer).



Anti-SAR1A antibody IHC of human small intestine.

SAR1A / SAR1 Antibody (Internal) - Background

Involved in transport from the endoplasmic reticulum to the Golgi apparatus (By similarity). Required to maintain SEC16A localization at discrete locations on the ER membrane perhaps by preventing its dissociation. SAR1A-GTP-dependent assembly of SEC16A on the ER membrane forms an organized scaffold defining endoplasmic reticulum exit sites (ERES).

SAR1A / SAR1 Antibody (Internal) - References

South S.T.,et al.J. Cell Biol. 149:1345-1360(2000).
Wiemann S.,et al.Genome Res. 11:422-435(2001).
Pietas A.,et al.Submitted (SEP-2000) to the EMBL/GenBank/DDBJ databases.
Ota T.,et al.Nat. Genet. 36:40-45(2004).
Deloukas P.,et al.Nature 429:375-381(2004).