

## SAR1A Human

**Description:** SAR1A Human Recombinant fused with 20 amino acid His tag at N-terminus produced in E.Coli is a single, non-glycosylated, polypeptide chain containing 218 amino acids (1-198 a.a.) and having a molecular mass of 24.5kDa. The SAR1A is purified by proprietary chromatographic techniques.

Catalog #: PRPS-716

For research use only.

**Synonyms:** GTP-binding protein SAR1a, COPII-associated small GTPase, SAR1A, SAR1, SARA, SARA1.

**Source:** Escherichia Coli.

**Physical Appearance:** Sterile Filtered colorless solution.

**Amino Acid Sequence:** MGSSHHHHHH SSGLVPRGSH MSFIFEWIYN GFSSVLQFLG  
LYKKSGLKLV LGLDNAGKTT LLHMLKDDRL GQHVPTLHPT SEELTIAGMT FTFDLGGHE  
QARRVWKNYL PAINGIVFLV DCADHSRLVE SKVELNALMT DETISNPIL ILGNKIDRTD  
AISEEKLREI FGLYGQTTGK GNVTLKELNA RPMEVFMCSV LKRQGYGEGF RWLSQYID.

**Purity:** Greater than 90.0% as determined by SDS-PAGE.

**Formulation:**

The SAR1A solution contains 20mM Tris-HCl buffer (pH8.0), 1mM DTT and 10% glycerol.

**Stability:**

SAR1A although stable 4°C for 4 weeks, should be stored desiccated below -18°C. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA). Please prevent freeze-thaw cycles.

**Usage:**

NeoBiolab's products are furnished for LABORATORY RESEARCH USE ONLY. The product may not be used as drugs, agricultural or pesticidal products, food additives or household chemicals.

**Introduction:**

SAR1A is a member of the small GTPase superfamily. SAR1A is a vital component of COPII vesicle coats involved in export of cargo from the ER (Endoplasmic Reticulum). The GTPase activity of SAR1A serves as a molecular switch to control protein-protein and protein-lipid interactions which dictate vesicle budding from the ER. SAR1A, while GDP-bound interacts with the membrane-bound exchange factor Sec12 and trades its bound GDP for GTP. SAR1A is also involved in the transport from the ER to the Golgi apparatus. SAR1A is required to maintain SEC16A localization at distinct locations on the ER membrane possibly by preventing its dissociation. SAR1A-GTP-dependent compilation of SEC16A on the ER membrane creates a structured scaffold defining endoplasmic reticulum exit sites.

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