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SDCCAG1 Antibody (N-term) Blocking Peptide

Synthetic peptide
Catalog # BP18740a

Specification

SDCCAG1 Antibody (N-term) Blocking Peptide - Product Information

Primary Accession O60524

SDCCAG1 Antibody (N-term) Blocking Peptide - Additional Information

Gene ID 9147

Other Names
Nuclear export mediator factor NEMF, Antigen NY-CO-1, Serologically defined colon cancer antigen 1, NEMF, SDCCAG1

Format
Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

Storage
Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

Precautions
This product is for research use only. Not for use in diagnostic or therapeutic procedures.

SDCCAG1 Antibody (N-term) Blocking Peptide - Protein Information

Name NEMF {ECO:0000303|PubMed:33048237, ECO:0000312|HGNC:HGNC:10663}

Function
Key component of the ribosome quality control complex (RQC), a ribosome-associated complex that mediates the extraction of incompletely synthesized nascent chains from stalled ribosomes as well as their ubiquitin-mediated proteasomal degradation (PubMed:25578875, PubMed:32726578, PubMed:33406423, PubMed:33909987). Thereby, frees 60S subunit ribosomes from the stalled translation complex and prevents the accumulation of nascent polypeptide chains that are potentially toxic for the cell (PubMed:25578875, PubMed:33406423, PubMed:33909987). Within the RQC complex, NEMF specifically binds stalled 60S ribosomal subunits by recognizing an exposed, nascent chain-conjugated tRNA moiety and promotes the recruitment of LTN1 to stalled 60S subunits (PubMed:25578875). Following binding to stalled 60S ribosomal subunits, NEMF mediates CAT tailing by recruiting alanine-charged tRNA to the A- site and directing the elongation

of stalled nascent chains independently of mRNA or 40S subunits, leading to non-templated C-terminal alanine extensions (CAT tails) (PubMed:33406423, PubMed:33909987). Mainly recruits alanine-charged tRNAs, but can also other amino acid-charged tRNAs (PubMed:33406423, PubMed:33909987). CAT tailing is required to promote ubiquitination of stalled nascent chains by different E3 ubiquitin-protein ligases (PubMed:33909987). In the canonical RQC pathway (RQC-L), CAT tailing facilitates LTN1-dependent ubiquitination by exposing lysine residues that would otherwise remain buried in the ribosomal exit tunnel (By similarity). In the alternative RQC pathway (RQC-C) CAT tailing creates an C-degron mainly composed of alanine that is recognized by the CRL2(KLHDC10) and RCHY1/PIRH2 E3 ligases, leading to ubiquitination and degradation of stalled nascent chains (PubMed:33909987). NEMF may also indirectly play a role in nuclear export (PubMed:16103875).

Cellular Location
Cytoplasm, cytosol. Nucleus

Tissue Location
Expressed in brain, heart, liver, lung, spleen, and skeletal muscle. Also expressed at lower levels in stomach and testis

SDCCAG1 Antibody (N-term) Blocking Peptide - Protocols

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

- Blocking Peptides

SDCCAG1 Antibody (N-term) Blocking Peptide - Images

SDCCAG1 Antibody (N-term) Blocking Peptide - Background

The function of this protein remains unknown.