

SDCG1 Antibody
Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP50585**Specification**

SDCG1 Antibody - Product Information

Application	WB
Primary Accession	O60524
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Calculated MW	123, 121, 118, 120, 31 KDa
Antigen Region	912-940

SDCG1 Antibody - Additional Information**Gene ID** 9147**Other Names**

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

Dilution

WB~~ 1:1000

FormatRabbit IgG in phosphate buffered saline (without Mg²⁺ and Ca²⁺), pH 7.4, 150mM NaCl, 0.09% (W/V) sodium azide and 50% glycerol.**Storage Conditions**

-20°C

SDCG1 Antibody - 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:33406423, PubMed:33406423).

[33909987](http://www.uniprot.org/citations/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](http://www.uniprot.org/citations/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](http://www.uniprot.org/citations/33406423), PubMed: [33909987](http://www.uniprot.org/citations/33909987)). Mainly recruits alanine-charged tRNAs, but can also other amino acid-charged tRNAs (PubMed: [33406423](http://www.uniprot.org/citations/33406423), PubMed: [33909987](http://www.uniprot.org/citations/33909987)). CAT tailing is required to promote ubiquitination of stalled nascent chains by different E3 ubiquitin-protein ligases (PubMed: [33909987](http://www.uniprot.org/citations/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](http://www.uniprot.org/citations/33909987)). NEMF may also indirectly play a role in nuclear export (PubMed: [16103875](http://www.uniprot.org/citations/16103875)).

Cellular Location

Cytoplasm, cytosol. Nucleus

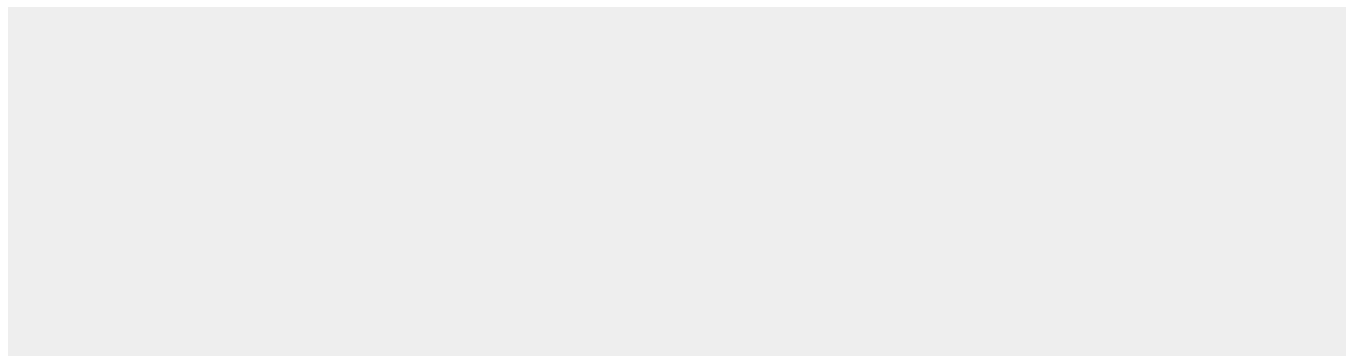
Tissue Location

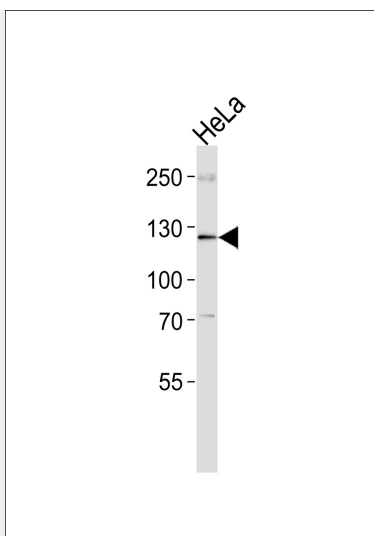
Expressed in brain, heart, liver, lung, spleen, and skeletal muscle. Also expressed at lower levels in stomach and testis

SDCG1 Antibody - 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](#)

SDCG1 Antibody - Images



Western blot analysis of lysate from HeLa cell line, using SDCG1 Antibody (AP50585). AP50585 was diluted at 1:1000. A goat anti-rabbit IgG H&L (HRP) at 1:5000 dilution was used as the secondary antibody. Lysate at 35 µg.

SDCG1 Antibody - Background

Plays a role in nuclear export.

SDCG1 Antibody - References

Ota T., et al. Nat. Genet. 36:40-45 (2004).
Bechtel S., et al. BMC Genomics 8:399-399 (2007).
Heilig R., et al. Nature 421:601-607 (2003).
Scanlan M.J., et al. Int. J. Cancer 76:652-658 (1998).
Bi X., et al. Oncogene 24:8229-8239 (2005).