

C9orf72 Antibody (C-term)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP12928b

Specification

C9orf72 Antibody (C-term) - Product Information

Application	WB,E
Primary Accession	Q96LT7
Other Accession	Q66HC3 , NP_060795.1 , NP_659442.2 , Q6DFW0
Reactivity	Human
Predicted	Mouse
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit Ig
Calculated MW	54328
Antigen Region	396-424

C9orf72 Antibody (C-term) - Additional Information

Gene ID 203228

Other Names

Protein C9orf72, C9orf72

Target/Specificity

This C9orf72 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 396-424 amino acids from the C-terminal region of human C9orf72.

Dilution

WB~~1:1000

Format

Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.

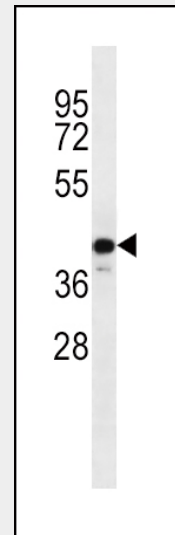
Storage

Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

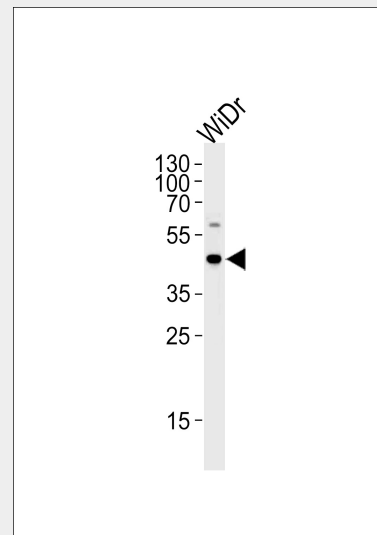
Precautions

C9orf72 Antibody (C-term) is for research use only and not for use in diagnostic or therapeutic procedures.

C9orf72 Antibody (C-term) - Protein Information



C9orf72 Antibody (C-term) (Cat. #AP12928b) western blot analysis in MDA-MB231 cell line lysates (35ug/lane). This demonstrates the C9orf72 antibody detected the C9orf72 protein (arrow).



C9orf72 Antibody (C-term) (Cat.# AP12928b) western blot analysis in WiDr cell lysate (35ug/lane). This demonstrates that the C9orf72 antibody detected C9orf72 protein (arrow).

C9orf72 Antibody (C-term) - References

Suarez-Gestal, M., et al. Arthritis Res. Ther. 12

Name C9orf72 ([HGNC:28337](#))

(2), R72 (2010) : van Es, M.A., et al. Nat. Genet. 41(10):1083-1087(2009) Humphray, S.J., et al. Nature 429(6990):369-374(2004)

Function

Component of the C9orf72-SMCR8 complex, a complex that has guanine nucleotide exchange factor (GEF) activity and regulates autophagy (PubMed:[27193190](http://www.uniprot.org/citations/27193190)), PubMed:[27103069](http://www.uniprot.org/citations/27103069), PubMed:[27617292](http://www.uniprot.org/citations/27617292), PubMed:[28195531](http://www.uniprot.org/citations/28195531)). In the complex, C9orf72 and SMCR8 probably constitute the catalytic subunits that promote the exchange of GDP to GTP, converting inactive GDP-bound RAB8A and RAB39B into their active GTP-bound form, thereby promoting autophagosome maturation (PubMed:[27103069](http://www.uniprot.org/citations/27103069)). The C9orf72-SMCR8 complex also acts as a regulator of autophagy initiation by interacting with the ATG1/ULK1 kinase complex and modulating its protein kinase activity (PubMed:[27617292](http://www.uniprot.org/citations/27617292)). Positively regulates initiation of autophagy by regulating the RAB1A-dependent trafficking of the ATG1/ULK1 kinase complex to the phagophore which leads to autophagosome formation (PubMed:[27334615](http://www.uniprot.org/citations/27334615)). Acts as a regulator of mTORC1 signaling by promoting phosphorylation of mTORC1 substrates (PubMed:[27559131](http://www.uniprot.org/citations/27559131)). Plays a role in endosomal trafficking (PubMed:[24549040](http://www.uniprot.org/citations/24549040)). May be involved in regulating the maturation of phagosomes to lysosomes (By similarity). Regulates actin dynamics in motor neurons by inhibiting the GTP-binding activity of ARF6, leading to ARF6 inactivation (PubMed:[27723745](http://www.uniprot.org/citations/27723745)). This reduces the activity of the LIMK1 and LIMK2 kinases which are responsible for phosphorylation and inactivation of cofilin, leading to cofilin activation (PubMed:[27723745](http://www.uniprot.org/citations/27723745)). Positively regulates axon extension and axon growth cone size in spinal motor neurons (PubMed:[27723745](http://www.uniprot.org/citations/27723745)). Plays a role within the hematopoietic system in restricting inflammation and the development of autoimmunity (By similarity).

Cellular Location

Nucleus. Cytoplasm. Cytoplasm, P-body.
Cytoplasm, Stress granule. Endosome
Lysosome Cytoplasmic vesicle,
autophagosome Secreted. Cell projection,
axon. Cell projection, growth cone. Perikaryon
{ECO:0000250|UniProtKB:Q6DFW0}.
Note=Detected in the cytoplasm of neurons
from brain tissue (PubMed:21944778).
Detected in the nucleus in fibroblasts
(PubMed:21944779). During corticogenesis,
transitions from being predominantly
cytoplasmic to a more even
nucleocytoplasmic distribution (By similarity).
{ECO:0000250|UniProtKB:Q6DFW0,
ECO:0000269|PubMed:21944778,
ECO:0000269|PubMed:21944779,
ECO:0000269|PubMed:27037575} [Isoform
2]: Nucleus membrane; Peripheral membrane
protein. Nucleus. Note=Detected at the
nuclear membrane of cerebellar Purkinje cells
and spinal motor neurons. Also shows diffuse
nuclear expression in spinal motor neurons

Tissue Location

Both isoforms are widely expressed, including
kidney, lung, liver, heart, testis and several
brain regions, such as cerebellum. Also
expressed in the frontal cortex and in
lymphoblasts (at protein level).

C9orf72 Antibody (C-term) - 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](#)

C9orf72 Antibody (C-term) - Citations

- [Novel antibodies reveal presynaptic localization of C9orf72 protein and reduced protein levels in C9orf72 mutation carriers.](#)
- [Immunohistochemical detection of C9orf72 protein in frontotemporal lobar degeneration and motor neurone disease: patterns of immunostaining and an evaluation of commercial antibodies.](#)
- [Loss-of-function mutations in the C9ORF72 mouse ortholog cause fatal autoimmune disease.](#)
- [The ALS/FTLD associated protein C9orf72 associates with SMCR8 and WDR41 to regulate the autophagy-lysosome pathway.](#)