

**ATP13A2 Polyclonal Antibody**  
**Purified Rabbit Polyclonal Antibody (Pab)**  
**Catalog # AP54602****Specification**

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**ATP13A2 Polyclonal Antibody - Product Information**

|                                |  |
|--------------------------------|--|
| Application                    | IHC-P, IHC-F, IF, ICC, E   |
| Primary Accession              | <a href="#">O9NQ11</a>   |
| Reactivity                     | Rat, Pig, Bovine   |
| Host                           | Rabbit   |
| Clonality                      | Polyclonal   |
| Calculated MW                  | 129 KDa  |
| Physical State                 | Liquid   |
| Immunogen                      | KLH conjugated synthetic peptide derived from human ATP13A2  |
| Epitope Specificity            | 1001-1080/1180   |
| Isotype                        | IgG  |
| <b>Purity</b>                  |  |
| affinity purified by Protein A |  |
| Buffer                         | 0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.  |
| SUBCELLULAR LOCATION           | Membrane; Multi-pass membrane protein (By similarity). Lysosome.   |
| SIMILARITY                     | Belongs to the cation transport ATPase (P-type) (TC 3.A.3) family. Type V subfamily.   |
| DISEASE                        | Defects in ATP13A2 are the cause of Kufor-Rakeb syndrome (KRS) [MIM:606693]; also known as Parkinson disease type 9 (PARK9). KRS is a rare hereditary disease with juvenile onset. In addition to typical signs of Parkinson disease, affected individuals show symptoms of more widespread neurodegeneration, including dementia. This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications. |
| Important Note                 |  |

**Background Descriptions**

ATP13A2 is a 1,180 amino acid multi-pass membrane protein that belongs to the P5 subfamily of ATPases which play an important role in the transportation of inorganic cations. Expressed as multiple alternative spliced isoforms, ATP13A2 functions to catalyze the conversion of ATP to ADP and a free phosphate, thereby participating in the active transport of ions across cellular membranes. Defects in the gene encoding ATP13A2 are the cause of Kufor-Rakeb syndrome (KRS), a rare hereditary type of Parkinson's disease that exhibits juvenile onset and is characterized by neurodegeneration and dementia. The ATP13A2 gene maps to human chromosome 1, which spans 260 million base pairs, contains over 3,000 genes and comprises nearly 8% of the human genome.

**ATP13A2 Polyclonal Antibody - Additional Information**

**Gene ID 23400****Other Names**

Polyamine-transporting ATPase 13A2, 7.6.2.-, ATP13A2 ([http://www.genenames.org/cgi-bin/gene\\_symbol\\_report?hgnc\\_id=30213](http://www.genenames.org/cgi-bin/gene_symbol_report?hgnc_id=30213))

**Target/Specificity**

Expressed in brain; protein levels are markedly increased in brain from subjects with Parkinson disease and subjects with dementia with Lewy bodies. Detected in pyramidal neurons located throughout the cingulate cortex (at protein level). In the substantia nigra, it is found in neuromelanin-positive dopaminergic neurons (at protein level).

**Dilution**

IHC-P ~ N/A  
IHC-F ~ N/A  
IF ~ 1:50 ~ 200  
ICC ~ N/A  
E ~ N/A

**Storage**

Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.

**ATP13A2 Polyclonal Antibody - Protein Information**

**Name** ATP13A2 ([HGNC:30213](#))

**Function**

ATPase which acts as a lysosomal polyamine exporter with high affinity for spermine (PubMed: [31996848](http://www.uniprot.org/citations/31996848)). Also stimulates cellular uptake of polyamines and protects against polyamine toxicity (PubMed: [31996848](http://www.uniprot.org/citations/31996848)). Plays a role in intracellular cation homeostasis and the maintenance of neuronal integrity (PubMed: [22186024](http://www.uniprot.org/citations/22186024)). Contributes to cellular zinc homeostasis (PubMed: [24603074](http://www.uniprot.org/citations/24603074)). Confers cellular protection against Mn(2+) and Zn(2+) toxicity and mitochondrial stress (PubMed: [26134396](http://www.uniprot.org/citations/26134396)). Required for proper lysosomal and mitochondrial maintenance (PubMed: [22296644](http://www.uniprot.org/citations/22296644), PubMed: [28137957](http://www.uniprot.org/citations/28137957)). Regulates the autophagy-lysosome pathway through the control of SYT11 expression at both transcriptional and post-translational levels (PubMed: [27278822](http://www.uniprot.org/citations/27278822)). Facilitates recruitment of deacetylase HDAC6 to lysosomes to deacetylate CTTN, leading to actin polymerization, promotion of autophagosome-lysosome fusion and completion of autophagy (PubMed: [30538141](http://www.uniprot.org/citations/30538141)). Promotes secretion of exosomes as well as secretion of SCNA via exosomes (PubMed: [24603074](http://www.uniprot.org/citations/24603074), PubMed: [25392495](http://www.uniprot.org/citations/25392495)). Plays a role in lipid homeostasis (PubMed: [31132336](http://www.uniprot.org/citations/31132336)).

**Cellular Location**

Lysosome membrane; Multi-pass membrane protein. Late endosome membrane; Multi-pass

membrane protein. Endosome, multivesicular body membrane; Multi-pass membrane protein. Cytoplasmic vesicle, autophagosome membrane; Multi-pass membrane protein

#### **Tissue Location**

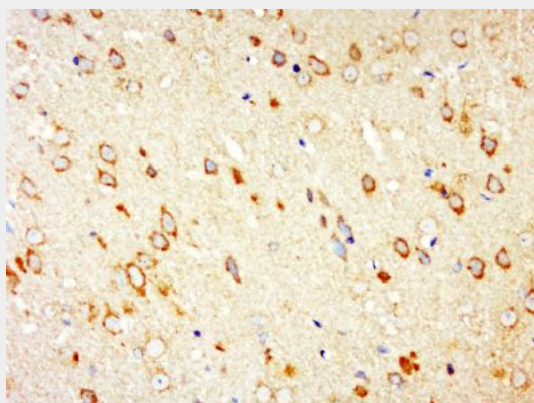
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#### **ATP13A2 Polyclonal Antibody - Protocols**

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](#)

#### **ATP13A2 Polyclonal Antibody - Images**



Paraformaldehyde-fixed, paraffin embedded (rat brain); Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15min; Block endogenous peroxidase by 3% hydrogen peroxide for 20 minutes; Blocking buffer (normal goat serum) at 37°C for 30min; Antibody incubation with (ATP13A2) Polyclonal Antibody, Unconjugated (bs-11708R) at 1:400 overnight at 4°C, followed by a conjugated secondary (sp-0023) for 20 minutes and DAB staining.