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WDFY3 Polyclonal Antibody

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP59425

Product Information

Application	IHC-P, IHC-F, IF, E
Primary Accession	Q8IZQ1
Reactivity	Rat, Pig, Dog, Bovine
Host	Rabbit
Clonality	Polyclonal
Calculated MW	395258
Physical State	Liquid
Immunogen	KLH conjugated synthetic peptide derived from human WDFY3
Epitope Specificity	951-1050/3526
Isotype	IgG
Purity	affinity purified by Protein A
Buffer	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
SUBCELLULAR LOCATION	Membrane; Peripheral membrane protein; Cytoplasmic side. Note: Colocalizes with autophagic structures in starved cells.
SIMILARITY	Contains 1 BEACH domain. Contains 1 FYVE-type zinc finger. Contains 5 WD repeats.
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Background Descriptions	WDFY3 was identified in a screen for phosphatidylinositol 3 phosphate binding proteins. The FYVE domain is a zinc binding domain found in many PtdIns binding proteins and is proposed to target proteins to membrane lipids. WDFY3 has been shown localized to the nuclear membrane and within autophagic membranes and it is proposed to function as a link between protein aggregates and the autophagic machinery. WDFY3 is also known as autophagy linked FYVE protein.

Additional Information

Gene ID	23001
Other Names	WD repeat and FYVE domain-containing protein 3, Autophagy-linked FYVE protein, Alfy, WDFY3, KIAA0993
Target/Specificity	Ubiquitous.
Dilution	IHC-P=1:100-500,IHC-F=1:100-500,IF=1:50-200,ELISA=1:5000-10000
Format	0.01M TBS(pH7.4) with 1% BSA, 0.09% (W/V) sodium azide and 50% Glyce
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

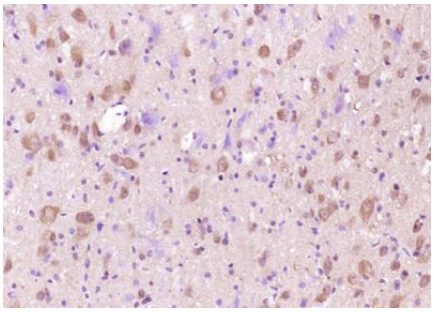
is stable for at least two weeks at 2-4 °C.

Protein Information

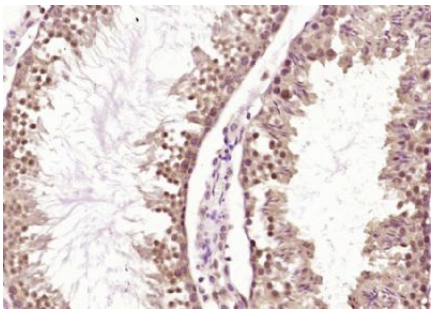
Name	WDFY3
Synonyms	KIAA0993
Function	Required for selective macroautophagy (aggrephagy). Acts as an adapter protein by linking specific proteins destined for degradation to the core autophagic machinery members, such as the ATG5- ATG12-ATG16L E3-like ligase, SQSTM1 and LC3 (PubMed:20417604). Along with p62/SQSTM1, involved in the formation and autophagic degradation of cytoplasmic ubiquitin-containing inclusions (p62 bodies, ALIS/aggresome-like induced structures). Along with SQSTM1, required to recruit ubiquitinated proteins to PML bodies in the nucleus (PubMed:20168092). Important for normal brain development. Essential for the formation of axonal tracts throughout the brain and spinal cord, including the formation of the major forebrain commissures. Involved in the ability of neural cells to respond to guidance cues. Required for cortical neurons to respond to the trophic effects of netrin-1/NTN1 (By similarity). Regulates Wnt signaling through the removal of DVL3 aggregates, likely in an autophagy-dependent manner. This process may be important for the determination of brain size during embryonic development (PubMed:27008544). May regulate osteoclastogenesis by acting on the TNFSF11/RANKL - TRAF6 pathway (By similarity). After cytokinetic abscission, involved in midbody remnant degradation (PubMed:24128730). In vitro strongly binds to phosphatidylinositol 3-phosphate (PtdIns3P) (PubMed:15292400).
Cellular Location	Nucleus membrane. Cytoplasm, cytosol. Nucleus, PML body. Membrane; Peripheral membrane protein; Cytoplasmic side Perikaryon {ECO:0000250|UniProtKB:Q6VNB8}. Cell projection, axon {ECO:0000250|UniProtKB:Q6VNB8}. Note=Relocalization from the nucleus to the cytosol is stimulated by cellular stress, such as starvation or proteasomal inhibition. In the cytosol of starved cells, colocalizes with autophagic structures (PubMed:15292400, PubMed:20168092, PubMed:20417604, PubMed:20971078). This redistribution is dependent on p62/SQSTM1 (PubMed:20168092). When nuclear export is blocked by treatment with leptomycin B, accumulates in nuclear bodies, that completely or partially colocalize with promyelocytic leukemia (PML) bodies (PubMed:20168092). Localizes throughout neurons, including within axons. In neurons, enriched in the light membrane fraction along with the synaptosomal membrane protein synaptophysin and the membrane- bound form of LC3/MAP1LC3A/MAP1LC3B, called LC3-II, a classic marker for autophagic vesicles (By similarity). {ECO:0000250|UniProtKB:Q6VNB8, ECO:0000269|PubMed:15292400, ECO:0000269|PubMed:20168092, ECO:0000269|PubMed:20417604, ECO:0000269|PubMed:20971078}
Tissue Location	Expressed in osteoclast and their mononuclear precursors (at protein level).

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 (WDFY3) Polyclonal Antibody, Unconjugated (AP59425) at 1:200 overnight at 4°C, followed by operating according to SP Kit(Rabbit) (sp-0023) instructionsand DAB staining.



Paraformaldehyde-fixed, paraffin embedded (mouse testis); 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 (WDFY3) Polyclonal Antibody, Unconjugated (AP59425) at 1:200 overnight at 4°C, followed by operating according to SP Kit(Rabbit) (sp-0023) instructionsand DAB staining.