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WDFY3 antibody - C-terminal region

Rabbit Polyclonal Antibody
Catalog # AI13240

Product Information

Application	WB
Primary Accession	Q8IZQ1
Other Accession	NM_178583, NP_848698
Reactivity	Human, Mouse, Rat, Rabbit, Pig, Dog, Guinea Pig, Horse, Bovine
Predicted	Human, Mouse, Rat, Rabbit, Pig, Chicken, Dog, Guinea Pig, Horse, Bovine
Host	Rabbit
Clonality	Polyclonal
Calculated MW	395258

Additional Information

Gene ID	23001
Alias Symbol	ALFY, KIAA0993, MGC16461, ZFYVE25
Other Names	WD repeat and FYVE domain-containing protein 3, Autophagy-linked FYVE protein, Alfy, WDFY3, KIAA0993
Format	Liquid. Purified antibody supplied in 1x PBS buffer with 0.09% (w/v) sodium azide and 2% sucrose.
Reconstitution & Storage	Add 50 ul of distilled water. Final anti-WDFY3 antibody concentration is 1 mg/ml in PBS buffer with 2% sucrose. For longer periods of storage, store at 20°C. Avoid repeat freeze-thaw cycles.
Precautions	WDFY3 antibody - C-terminal region is for research use only and not for use in diagnostic or therapeutic procedures.

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).

References

Simonsen A.,et al.J. Cell Sci. 117:4239-4251(2004).
Hillier L.W.,et al.Nature 434:724-731(2005).
Nagase T.,et al.DNA Res. 6:63-70(1999).
Nakajima D.,et al.DNA Res. 9:99-106(2002).
Ota T.,et al.Nat. Genet. 36:40-45(2004).

Images



WB Suggested Anti-WDFY3 Antibody Titration: 0.2-1 µg/ml
Positive Control: Human brain

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.