abcam

ab36959

Anti-Sortilin/NT3 antibody

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	pH: 7 - 7.4
Form	Liquid
Clonality	Polyclonal
Immunogen	Recombinant Protein within Human Sortilin. Database link Q99523
Purity	Whole antiserum

Reactivity data

Flow Cyt

Expected

Species	Mouse
Dilution info	-
Notes	ab171870 - Rabbit polyclonal IgG, is suitable for use as an isotype control with this antibody.

Species	Rat
Dilution info	-
Notes	ab171870 - Rabbit polyclonal IgG, is suitable for use as an isotype control with this antibody.

Species	Human

Dilution info	-
Notes	ab171870 - Rabbit polyclonal IgG, is suitable for use as an isotype control with this antibody.

ELISA

Expected

Species	Mouse, Rat, Human
Dilution info	Use at an assay dependent concentration.
Notes	-

Dot

Expected

Species	Mouse, Rat, Human
Dilution info	Use at an assay dependent concentration.
Notes	-

WB

Not recommended

Species	Mouse, Rat, Human
Dilution info	-
Notes	-

IHC-Fr

Expected

Species	Mouse, Rat, Human
Dilution info	Use at an assay dependent concentration.
Notes	-

Target data

See full target information Sortilin

Function	Functions as a sorting receptor in the Golgi compartment and as a clearance receptor on the cell surface. Required for protein transport from the Golgi apparatus to the lysosomes by a pathway that is independent of the mannose-6-phosphate receptor (M6PR). Lysosomal proteins bind specifically to the receptor in the Golgi apparatus and the resulting receptor-ligand complex is transported to an acidic prelysosomal compartment where the low pH mediates the dissociation of the complex (PubMed:16787399). The receptor is then recycled back to the Golgi for another round of trafficking through its binding to the retromer. Also required for protein transport from the Golgi apparatus to the endosomes. Promotes neuronal apoptosis by mediating endocytosis of the proapoptotic precursor forms of BDNF (proBDNF) and NGFB (proNGFB). Also acts as a receptor for neurotensin. May promote mineralization of the extracellular matrix during osteogenic differentiation by scavenging extracellular LPL. Probably required in adipocytes for the formation of specialized storage vesicles containing the glucose transporter SLC2A4/GLUT4 (GLUT4 storage vesicles, or GSVs). These vesicles provide a stable pool of SLC2A4 and confer increased responsiveness to insulin. May also mediate transport from the endoplasmic reticulum to the Golgi.

Storage

Shipped at conditions	Blue Ice
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	-20°C
Aliquoting information	Upon delivery aliquot
Storage information	Avoid freeze / thaw cycle

Supplementary info

This supplementary information is collated from multiple sources and compiled automatically.

Activity summary	Sortilin also known as NT3 receptor is a type I membrane protein with an approximate molecular mass of 100 kDa. It is expressed in various tissues especially the central nervous system and adipose tissue. Sortilin belongs to the Vps10p domain receptor family and functions in intracellular protein sorting. Its primary role involves the transport and signaling of neurotrophins particularly NT-3 protein (neurotrophin-3) which is vital for neuronal growth and survival.
Biological function summary	NT-3 protein influences the development and differentiation of the nervous system. Sortilin serves as a receptor for NT-3 facilitating the interaction with the TrkC receptor on neuronal cells. Sortilin forms a complex with NT-3 contributing to critical cellular processes. Being part of this receptor complex Sortilin modulates

	neuron-related signaling pathways which are essential for neurogenesis and synaptic plasticity.
Pathways	Sortilin and NT-3 play significant roles in the neurotrophin signaling pathway and influence the MAPK signaling cascade. These pathways are pivotal in neuron survival differentiation and growth. NT-3 interacts with other proteins such as TrkC and p75 to propagate these signals. Through its association with TrkC receptor Sortilin mediates critical cellular responses linked to neurotrophin signaling. The interplay between these proteins allows precise regulation of neuronal activities in various physiological states.
Associated diseases and disorders	NT-3 and Sortilin have associations with neurodegenerative conditions such as Alzheimer's disease and metabolic disorders like obesity. Dysregulation of Sortilin can contribute to abnormal NT-3 signaling affecting neuronal homeostasis. The protein also shows links with amyloid precursor protein (APP) in Alzheimer's disease where abnormal interactions may exacerbate disease progression. Understanding the dynamics of Sortilin in these conditions can offer insights into potential therapeutic approaches.

Product promise

Tested

We have tested this species and application combination and it works. It is covered by our product promise.

Expected

We have not tested this specific species and application combination in-house, but expect it will work. It is covered by our product promise.

Predicted

This species and application combination has not been tested, but we predict it will work based on strong homology. However, this combination is not covered by our product promise.

Not recommended

We do not recommend this combination. It is not covered by our product promise.

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In the unlikely event of one of our products not working as expected, you are covered by our product promise.

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