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STK39 / SPAK Antibody (C-Terminus)

Rabbit Polyclonal Antibody
Catalog # ALS13003

Specification

STK39 / SPAK Antibody (C-Terminus) - Product Information

Application	**IF, IHC**
Primary Accession	Q9UEW8
Reactivity	**Human, Mouse**
Host	**Rabbit**
Clonality	**Polyclonal**
Calculated MW	**59kDa KDa**

STK39 / SPAK Antibody (C-Terminus) - Additional Information

Gene ID 27347

Other Names
STE20/SPS1-related proline-alanine-rich protein kinase, Ste-20-related kinase, 2.7.11.1, DCHT, Serine/threonine-protein kinase 39, STK39, SPAK

Reconstitution & Storage
Short term 4°C, long term aliquot and store at -20°C, avoid freeze thaw cycles. Store undiluted.

Precautions
STK39 / SPAK Antibody (C-Terminus) is for research use only and not for use in diagnostic or therapeutic procedures.

STK39 / SPAK Antibody (C-Terminus) - Protein Information

Name STK39

Function
Effector serine/threonine-protein kinase component of the WNK-SPAK/OSR1 kinase cascade, which is involved in various processes, such as ion transport, response to hypertonic stress and blood pressure (PubMed:16669787, PubMed:18270262, PubMed:21321328, PubMed:34289367). Specifically recognizes and binds proteins with a RFXV motif (PubMed:16669787, PubMed:21321328). Acts downstream of WNK kinases (WNK1, WNK2, WNK3 or WNK4): following activation by WNK kinases, catalyzes phosphorylation of ion cotransporters, such as SLC12A1/NKCC2, SLC12A2/NKCC1, SLC12A3/NCC, SLC12A5/KCC2 or SLC12A6/KCC3, regulating their activity (PubMed:21321328). Mediates regulatory volume increase in response to hyperosmotic stress by catalyzing phosphorylation of ion cotransporters SLC12A1/NKCC2, SLC12A2/NKCC1 and SLC12A6/KCC3

downstream of WNK1 and WNK3 kinases (PubMed:12740379, PubMed:16669787, PubMed:21321328). Phosphorylation of Na-K-Cl cotransporters SLC12A2/NKCC1 and SLC12A2/NKCC1 promote their activation and ion influx; simultaneously, phosphorylation of K-Cl cotransporters SLC12A5/KCC2 and SLC12A6/KCC3 inhibit their activity, blocking ion efflux (PubMed:16669787, PubMed:19665974, PubMed:21321328). Acts as a regulator of NaCl reabsorption in the distal nephron by mediating phosphorylation and activation of the thiazide-sensitive Na-Cl cotransporter SLC12A3/NCC in distal convoluted tubule cells of kidney downstream of WNK4 (PubMed:18270262). Mediates the inhibition of SLC4A4, SLC26A6 as well as CFTR activities (By similarity). Phosphorylates RELT (By similarity).

Cellular Location
Cytoplasm. Nucleus. Note=Nucleus when caspase-cleaved.

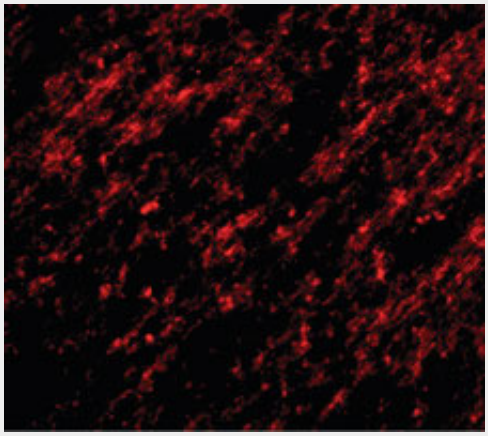
Tissue Location
Predominantly expressed in brain and pancreas followed by heart, lung, kidney, skeletal muscle, liver, placenta and testis.

STK39 / SPAK Antibody (C-Terminus) - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

STK39 / SPAK Antibody (C-Terminus) - Images



Immunofluorescence of stk39 in human brain tissue with stk39 antibody at 20 ug/ml.

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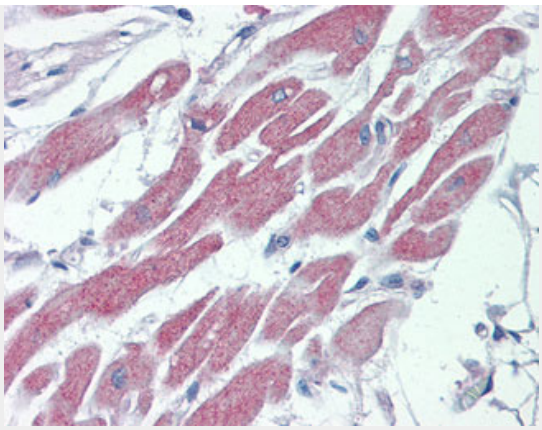
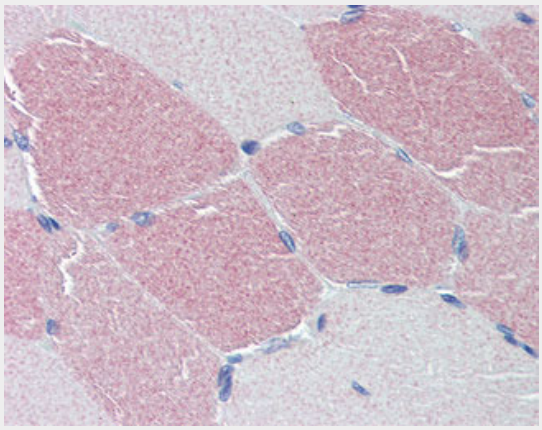


Anti-SPAK antibody IHC of human heart.



Anti-SPAK antibody IHC of human skeletal muscle.

STK39 / SPAK Antibody (C-Terminus) - Background

May act as a mediator of stress-activated signals.

STK39 / SPAK Antibody (C-Terminus) - References

Johnston A.M.,et al.Oncogene 19:4290-4297(2000).
Corominas R.,et al.Nat. Commun. 5:3650-3650(2014).
Melnick M.B.,et al.Submitted (OCT-1997) to the EMBL/GenBank/DDBJ databases.
Hillier L.W.,et al.Nature 434:724-731(2005).
Baytel D.,et al.Submitted (AUG-1997) to the EMBL/GenBank/DDBJ databases.