

**STK39 / SPAK Antibody (Internal)**  
**Goat Polyclonal Antibody**  
**Catalog # ALS15367****Specification**

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**STK39 / SPAK Antibody (Internal) - Product Information**

Application	WB, IHC
Primary Accession	<a href="#">O9UEW8</a>
Reactivity	Human, Rat, Rabbit, Hamster, Monkey, Horse, Dog
Host	Goat
Clonality	Polyclonal
Calculated MW	59kDa KDa

**STK39 / SPAK Antibody (Internal) - 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

**Target/Specificity**

Human STK39 / SPAK.

**Reconstitution & Storage**

Store at -20°C. Minimize freezing and thawing.

**Precautions**

STK39 / SPAK Antibody (Internal) is for research use only and not for use in diagnostic or therapeutic procedures.

**STK39 / SPAK Antibody (Internal) - 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](http://www.uniprot.org/citations/16669787), PubMed: [18270262](http://www.uniprot.org/citations/18270262), PubMed: [21321328](http://www.uniprot.org/citations/21321328), PubMed: [34289367](http://www.uniprot.org/citations/34289367)). Specifically recognizes and binds proteins with a RFXV motif (PubMed: [16669787](http://www.uniprot.org/citations/16669787), PubMed: [21321328](http://www.uniprot.org/citations/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:<a href="http://www.uniprot.org/citations/21321328" target="\_blank">21321328</a>). 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:<a href="http://www.uniprot.org/citations/12740379" target="\_blank">12740379</a>, PubMed:<a href="http://www.uniprot.org/citations/16669787" target="\_blank">16669787</a>, PubMed:<a href="http://www.uniprot.org/citations/21321328" target="\_blank">21321328</a>). 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:<a href="http://www.uniprot.org/citations/16669787" target="\_blank">16669787</a>, PubMed:<a href="http://www.uniprot.org/citations/19665974" target="\_blank">19665974</a>, PubMed:<a href="http://www.uniprot.org/citations/21321328" target="\_blank">21321328</a>). 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:<a href="http://www.uniprot.org/citations/18270262" target="\_blank">18270262</a>). 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

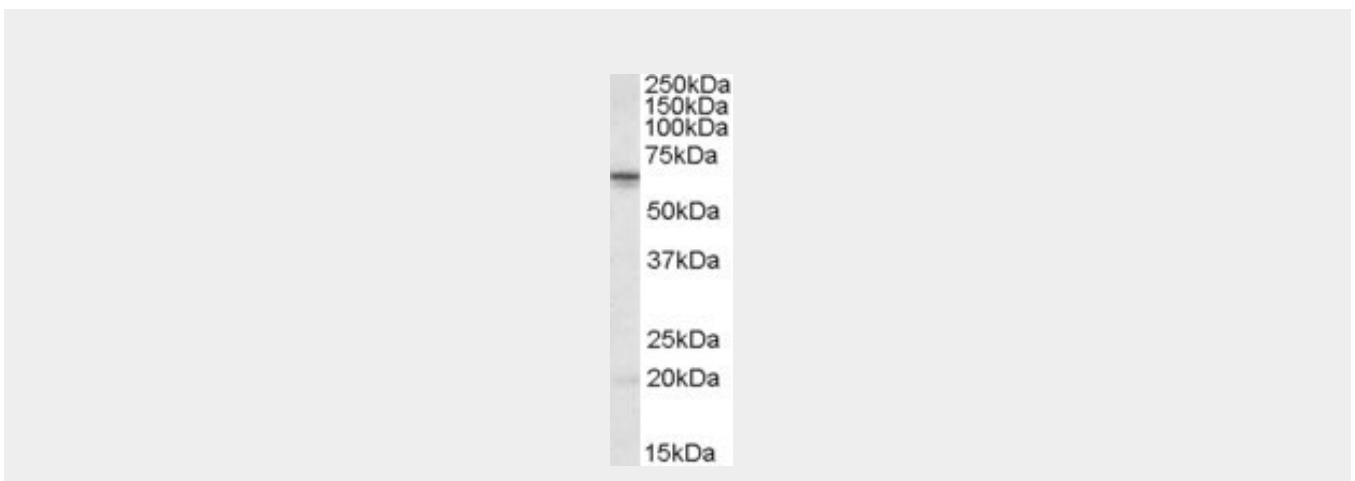
Predominantly expressed in brain and pancreas followed by heart, lung, kidney, skeletal muscle, liver, placenta and testis.

### STK39 / SPAK Antibody (Internal) - Protocols

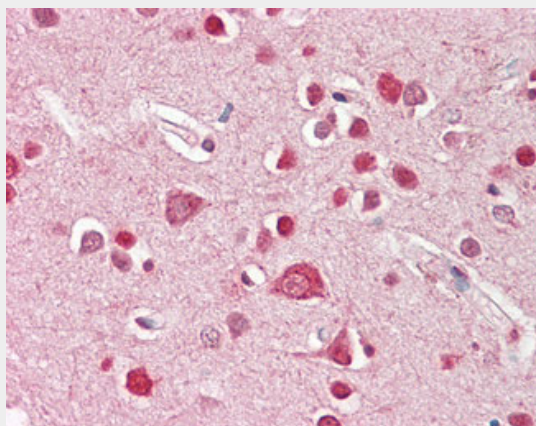
Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

### STK39 / SPAK Antibody (Internal) - Images



STK39 antibody (0.5 ug/ml) staining of Jurkat lysate (35 ug protein/ml in RIPA buffer).



Anti-STK39 / SPAK antibody IHC of human brain, cortex.

### **STK39 / SPAK Antibody (Internal) - Background**

May act as a mediator of stress-activated signals.

### **STK39 / SPAK Antibody (Internal) - 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.