10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

KD-Validated Anti-Serine/Threonine Kinase 39 Rabbit Monoclonal Antibody

Rabbit monoclonal antibody
Catalog # AGI1403

Product Information

Application	WB, FC
Primary Accession	Q9UEW8
Reactivity	Rat, Human
Clonality	Monoclonal
Isotype	Rabbit IgG
Clone Names	25GB3395
Calculated MW	59474
Gene Name	STK39
Aliases	STK39; Serine/Threonine Kinase 39; DCHT; SPAK; STE20/SPS1-Related Proline-Alanine-Rich Protein Kinase; Serine/Threonine-Protein Kinase 39; Ste-20-Related Kinase; EC 2.7.11.1; PASK; Serine Threonine Kinase 39 (STE20/SPS1 Homolog, Yeast); Proline-Alanine-Rich STE20-Related Kinase; Small Intestine SPAK-Like Kinase; STE20/SPS1 Homolog (Yeast); Serine Threonine Kinase 39; Ste20-Like Protein Kinase; STE20/SPS1 Homolog; EC 2.7.11
Immunogen	A synthesized peptide derived from human STK39

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

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.

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