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

Rabbit monoclonal antibody

Catalog # AGI1403

Specification

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

Application	**WB, FC**
Primary Accession	Q9UEW8
Reactivity	**Rat, Human**
Clonality	**Monoclonal**
Isotype	**Rabbit IgG**
Calculated MW	**Predicted, 59 kDa; observed, 68 kDa KDa**
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**

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

KD-Validated Anti-Serine/Threonine Kinase 39 Rabbit Monoclonal Antibody - 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:<a href="http://www.uniprot.org/citations/21321328"

target="_blank">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.

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

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

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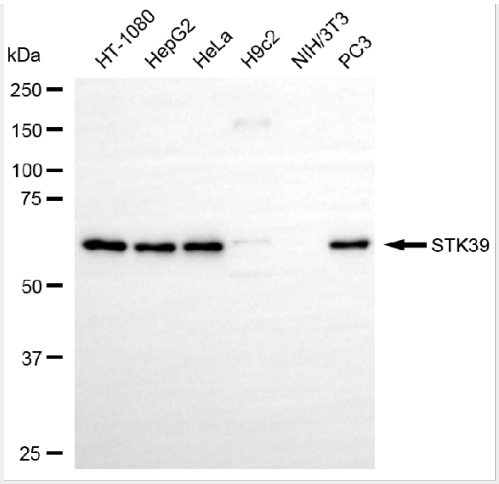
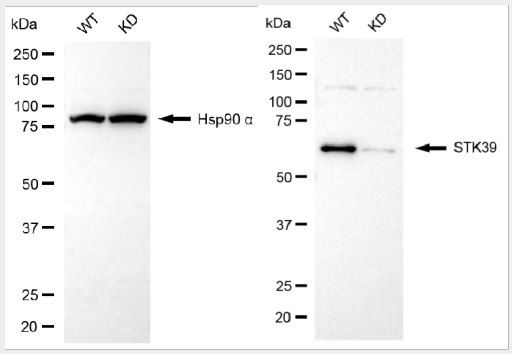
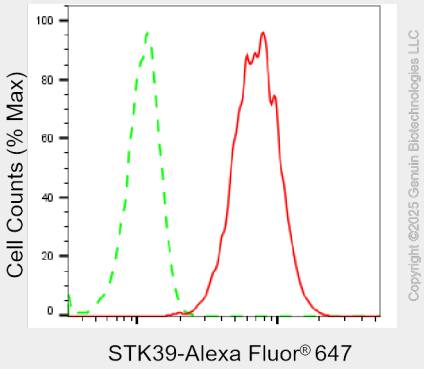


Western blotting analysis using anti-STK39 antibody (Cat#AGI1403). Total cell lysates (30 µg) from various cell lines were loaded and separated by SDS-PAGE. The blot was incubated with anti-STK39 antibody (Cat#AGI1403, 1:5,000) and HRP-conjugated goat anti rabbit secondary antibody respectively.



Western blotting analysis using anti-STK39 antibody (Cat#AGI1403). STK39 expression in wild type (WT) and STK39 knockdown (KD) HSHC cells with 20 µg of total cell lysates. Hsp90 α serves as a loading control. The blot was incubated with anti-STK39 antibody (Cat#AGI1403, 1:5,000) and HRP-conjugated goat anti-rabbit secondary antibody respectively.



Flow cytometric analysis of STK39 expression in HepG2 cells using anti-STK39 antibody (Cat#AGI1403, 1:2,000). Green, isotype control; red, STK39.