**BACKGROUND**

Serum- and glucocorticoid-regulated kinase (SGK), also known as SGK1, is a serine/threonine protein kinase and a member of the “AGC” subfamily, which includes protein kinases A, G, and C. SGK plays an important role in activating certain potassium, sodium, and chloride channels, suggesting an involvement in the regulation of processes such as cell survival, neuronal excitability, and renal sodium excretion. SGK contains a catalytic domain, which is most similar to Akt1 (also known as protein kinase B or PKB). SGK is a downstream target of PI 3-kinase-stimulated growth factor signaling, with 3-phosphoinositide-dependent protein kinase 1 (PDK1) capable of phosphorylating the activation-loop of SGK at Threonine-256. The adrenal corticosteroid hormone, Aldosterone, induces the transcription of SGK, which mediates Na⁺ transport by stimulating epithelial sodium channel activity. The SGK promoter contains a glucocorticoid response element and an SP-1 regulatory element, and is a transcriptional target for p53. SGK is also a component of the p38 MAPK-mediated response to hyperosmotic stress. The human SGK gene maps to chromosome 6q23.2 and encodes the 431-amino acid SGK protein.

**CHROMOSOMAL LOCATION**

Genetic locus: SGK1 (human) mapping to 6q23.2; Sgk1 (mouse) mapping to 10A3.

**SOURCE**

SGK (H-4) is a mouse monoclonal antibody specific for an epitope mapping between 400-425 containing Ser 422 of SGK of human origin.

**PRODUCT**

Each vial contains 200 µg IgG2b kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-28338 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

**APPLICATIONS**

SGK (H-4) is recommended for detection of SGK of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range ), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).


Molecular Weight (predicted) of SGK isoforms: 48/50/52/60 kDa.

Molecular Weight (observed) of SGK isoforms: 42/49/60 kDa.

Positive Controls: NIH/3T3 whole cell lysate: sc-2210.

**STORAGE**

Store at 4°C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

**DATA**

SGK (H-4): sc-28338. Western blot analysis of human recombinant SGK.

SGK (H-4): sc-28338. Immunoperoxidase staining of formalin fixed, paraffin-embedded human pancreas tissue showing cytoplasmic staining of islets of Langerhans (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human gallbladder tissue showing cytoplasmic and membrane staining of glandular cells (B).

**SELECT PRODUCT CITATIONS**


**RESEARCH USE**

For research use only, not for use in diagnostic procedures.

See SGK (G-4): sc-377360 for SGK antibody conjugates, including AC, HRP, FITC, PE, Alexa Fluor® 488 and Alexa Fluor® 647.