BACKGROUND
GUK1 (guanylate kinase 1), also known as GMK (GMP kinase), is a 197 amino acid protein that contains one guanylate kinase-like domain and belongs to the guanylate kinase family. Ubiquitously expressed, GUK1 exists as a monomer that catalyzes the ATP-dependent conversion of GMP to GDP, thereby playing an essential role in the recycling of GMP. Via its catalytic activity, GUK1 is thought to participate in regulating the supply of guanine nucleotides to signal transduction pathways. Overexpression of GUK1 is associated with pituitary adenocarcinomas, suggesting that GUK1 is involved in tumorigenesis.

REFERENCES

CHROMOSOMAL LOCATION
Genetic locus: GUK1 (human) mapping to 1q42.13; Guk1 (mouse) mapping to 11 B1.3.

SOURCE
GUK1 (C-4) is a mouse monoclonal antibody raised against amino acids 32-108 mapping within an internal region of GUK1 of human origin.

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

GUK1 (C-4) is available conjugated to agarose (sc-365026 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-365026 HRP), 200 µg/ml, for WB, (HC)P and ELISA; to either phycoerythrin (sc-365026 PE), fluorescein (sc-365026 FITC), Alexa Fluor® 488 (sc-365026 AF488), Alexa Fluor® 546 (sc-365026 AF546), Alexa Fluor® 594 (sc-365026 AF594) or Alexa Fluor® 647 (sc-365026 AF647), 200 µg/ml, for WB (RGB), IF (HC)P and FCM; and to either Alexa Fluor® 680 (sc-365026 AF680) or Alexa Fluor® 790 (sc-365026 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS
GUK1 (C-4) is recommended for detection of GUK1 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for GUK1 siRNA (h): sc-78622, GUK1 siRNA (m): sc-145841, GUK1 shRNA Plasmid (h): sc-78622-SH, GUK1 shRNA Plasmid (m): sc-145841-SH, GUK1 shRNA (h) Lentiviral Particles: sc-78622-V and GUK1 shRNA (m) Lentiviral Particles: sc-145841-V.

Molecular Weight of GUK1: 22 kDa.

Positive Controls: Y79 cell lysate: sc-2240, RPE-J cell lysate: sc-24771 or PC-12 cell lysate: sc-2250.

RECOMMENDED SUPPORT REAGENTS
To ensure optimal results, the following support reagents are recommended:
1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-PE: sc-516214 and Western Blotting Luminoel Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml).

DATA

SELECT PRODUCT CITATIONS

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

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