



## BMP2K (S-13): sc-131438

### BACKGROUND

The phosphorylation and dephosphorylation of proteins on serine and threonine residues is an essential means of regulating a broad range of cellular functions in eukaryotes, including cell division, homeostasis and apoptosis. A group of proteins that are intimately involved in this process are the serine/threonine (Ser/Thr) protein kinases. BMP2K (BMP2 inducible kinase), also known as BIKE, is a 1,161 amino acid nuclear protein that contains one protein kinase domain and belongs to the Ser/Thr protein kinase family. Thought to be involved in osteoblast differentiation, BMP2K catalyzes the ATP-dependent phosphorylation of bone morphogenic proteins (BMPs); proteins that are essential for proper cartilage and bone formation. Via its catalytic activity, BMP2K may play a role in signaling pathways that mediate bone growth and cellular differentiation. Three isoforms of BMP2K exist due to alternative splicing events.

### REFERENCES

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### CHROMOSOMAL LOCATION

Genetic locus: BMP2K (human) mapping to 4q21.21; Bmp2k (mouse) mapping to 5 E3.

### SOURCE

BMP2K (S-13) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of BMP2K of human origin.

### STORAGE

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

### PRODUCT

Each vial contains 200  $\mu$ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-131438 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

### APPLICATIONS

BMP2K (S-13) is recommended for detection of BMP2K isoforms 1-3 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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); non cross-reactive with BMP2KL.

Suitable for use as control antibody for BMP2K siRNA (h): sc-89069, BMP2K siRNA (m): sc-141719, BMP2K shRNA Plasmid (h): sc-89069-SH, BMP2K shRNA Plasmid (m): sc-141719-SH, BMP2K shRNA (h) Lentiviral Particles: sc-89069-V and BMP2K shRNA (m) Lentiviral Particles: sc-141719-V.

Molecular Weight of BMP2K: 126 kDa.

Positive Controls: Hep G2 cell lysate: sc-2227.

### RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

### RESEARCH USE

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

### PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.