

## Bek (P-17): sc-31166

### BACKGROUND

Acidic and basic fibroblast growth factors (FGFs) are members of a family of multifunctional polypeptide growth factors that stimulate proliferation of cells of mesenchymal, epithelial and neuroectodermal origin. Like other growth factors, FGFs act by binding and activating specific cell surface receptors. These include the Flg receptor or FGFR-1, the Bek receptor (or FGFR-2), FGFR-3, FGFR-4, FGFR-5 and FGFR-6. These receptors usually contain an extracellular ligand-binding region containing three immunoglobulin-like domains, a transmembrane domain and a cytoplasmic tyrosine kinase domain. The gene encoding human Bek (also designated K-sam) maps to chromosome 10q26.13 and is alternatively spliced to produce several isoforms. Heterogeneous mutations in Bek are associated with a range of craniosynostosis syndromes including Pfeiffer syndrome, Crouzon syndrome, Jackson-Weiss syndrome and Apert syndrome.

### REFERENCES

1. Rifkin, D.B. and Moscatelli, D. 1989. Recent developments in the cell biology of fibroblast growth factor. *J. Cell Biol.* 109: 1-6.
2. Dionne, C.A., et al. 1990. Cloning and expression of two distinct high-affinity receptors cross-reacting with acidic and basic fibroblast growth factors. *EMBO J.* 9: 2685-2692.
3. Mansukhani, A., et al. 1992. Characterization of the murine BEK fibroblast growth factor (FGF) receptor: activation by three members of the FGF family and requirement for heparin. *Proc. Natl. Acad. Sci. USA* 89: 3305-3309.
4. Kishi, T., et al. 1994. A soluble form of K-sam/FGFR2 protein in the culture medium of human gastric cancer cells. *Biochem. Biophys. Res. Commun.* 202: 1387-1394.
5. Ueda, T., et al. 1999. Deletion of the carboxyl-terminal exons of K-Sam/FGFR2 by short homology-mediated recombination, generating preferential expression of specific messenger RNAs. *Cancer Res.* 59: 6080-6086.
6. Britto, J.A., et al. 2001. Negative autoregulation of fibroblast growth factor receptor 2 expression characterizing cranial development in cases of Apert (P253R mutation) and Pfeiffer (C278F mutation) syndromes and suggesting a basis for differences in their cranial phenotypes. *J. Neurosurg.* 95: 660-673.

### CHROMOSOMAL LOCATION

Genetic locus: FGFR2 (human) mapping to 10q26.13; Fgfr2 (mouse) mapping to 7 F3.

### SOURCE

Bek (P-7) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an N-terminal extracellular domain of Bek 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 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-31164 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

### APPLICATIONS

Bek (P-7) is recommended for detection of Bek 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).

Bek (P-7) is also recommended for detection of Bek in additional species, including equine, bovine and porcine.

Suitable for use as control antibody for Bek siRNA (h): sc-29218, Bek siRNA (m): sc-29799, Bek siRNA (r): sc-270078, Bek shRNA Plasmid (h): sc-29218-SH, Bek shRNA Plasmid (m): sc-29799-SH, Bek shRNA Plasmid (r): sc-270078-SH, Bek shRNA (h) Lentiviral Particles: sc-29218-V, Bek shRNA (m) Lentiviral Particles: sc-29799-V and Bek shRNA (r) Lentiviral Particles: sc-270078-V.

Molecular Weight of Bek monomer: 110/120 kDa.

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

### 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.

**MONOS**  
Satisfaction  
Guaranteed

Try **Bek (C-8): sc-6930**, our highly recommended monoclonal alternative to Bek (P-17). Also, for AC, HRP, FITC, PE, Alexa Fluor® 488 and Alexa Fluor® 647 conjugates, see **Bek (C-8): sc-6930**.