

## ZZEF1 (S-16): sc-169920

### BACKGROUND

ZZEF1 (zinc finger ZZ-type and EF-hand domain-containing protein 1), also known as ZZZ4, is a 2,961 amino acid protein that contains one DOC domain, an EF-hand domain and 2 ZZ-type zinc fingers. Expressed at low levels in cerebellum and existing as 3 alternatively spliced isoforms, ZZEF1 is encoded by a gene that maps to human chromosome 17p13.2. Chromosome 17 comprises over 2.5% of the human genome and encodes over 1,200 genes. Two key tumor suppressor genes are associated with chromosome 17, namely, p53 and BRCA1. Tumor suppressor p53 is necessary for maintenance of cellular genetic integrity by moderating cell fate through DNA repair versus cell death. Malfunction or loss of p53 expression is associated with malignant cell growth and Li-Fraumeni syndrome. Like p53, BRCA1 is directly involved in DNA repair, though specifically it is recognized as a genetic determinant of early onset breast cancer and predisposition to cancers of the ovary, colon, prostate gland and fallopian tubes.

### REFERENCES

- Hall, J.M., et al. 1992. Closing in on a breast cancer gene on chromosome 17q. *Am. J. Hum. Genet.* 50: 1235-1242.
- Evans, S.C., et al. 1997. The Li-Fraumeni syndrome: an inherited susceptibility to cancer. *Mol. Med. Today* 3: 390-395.
- Varley, J.M., et al. 1997. A detailed study of loss of heterozygosity on chromosome 17 in tumours from Li-Fraumeni patients carrying a mutation to the TP53 gene. *Oncogene* 14: 865-871.
- Kersemaekers, A.M., et al. 1998. Loss of heterozygosity for defined regions on chromosomes 3, 11 and 17 in carcinomas of the uterine cervix. *Br. J. Cancer* 77: 192-200.
- Soussi, T., et al. 2000. p53 website and analysis of p53 gene mutations in human cancer: forging a link between epidemiology and carcinogenesis. *Hum. Mutat.* 15: 105-113.
- Piura, B., et al. 2001. Three primary malignancies related to BRCA1 mutation successively occurring in a BRCA1 185delAG mutation carrier. *Eur. J. Obstet. Gynecol. Reprod. Biol.* 97: 241-244.
- Minamoto, T., et al. 2001. Distinct pattern of p53 phosphorylation in human tumors. *Oncogene* 20: 3341-3347.

### CHROMOSOMAL LOCATION

Genetic locus: ZZEF1 (human) mapping to 17p13.2; Zzef1 (mouse) mapping to 11 B4.

### SOURCE

ZZEF1 (S-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of ZZEF1 of human origin.

### 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-169920 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

### APPLICATIONS

ZZEF1 (S-16) is recommended for detection of ZZEF1 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).

ZZEF1 (S-16) is also recommended for detection of ZZEF1 in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for ZZEF1 siRNA (h): sc-93585, ZZEF1 siRNA (m): sc-155856, ZZEF1 shRNA Plasmid (h): sc-93585-SH, ZZEF1 shRNA Plasmid (m): sc-155856-SH, ZZEF1 shRNA (h) Lentiviral Particles: sc-93585-V and ZZEF1 shRNA (m) Lentiviral Particles: sc-155856-V.

Molecular Weight of ZZEF1 isoforms 1/2/3: 331/270/120 kDa.

### 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.

### 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.

### PROTOCOLS

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