

FKBPL (S-13): sc-161054



The Power to Question

BACKGROUND

The immunophilins are a highly conserved family of *cis-trans* peptidyl-prolyl isomerases that bind to and mediate the effects of immunosuppressive drugs, such as cyclosporin, FK506 and rapamycin. FKBPL (FK506-binding protein-like), also known as WAF-1/CIP1 stabilizing protein 39 and DIR1, is a 349 amino acid immunophilin protein that recruits Hsp 90 to stabilize p21 by preventing its proteosomal degradation. After ionizing radiation, FKBPL is transiently repressed and may play a role in induced radioresistance through a mechanism that increases rate of DNA repair in X ray exposed cells. siRNA knockdown of FKBPL results in decreased levels of cell cycle inhibitor p21WAF1 and increased ER α phosphorylation in response to 17- β Estradiol and tamoxifen. This evidence suggests that FKBPL may have an impact on tumor proliferative capacity and sensitivity to endocrine therapies.

REFERENCES

1. Robson, T., et al. 1999. A novel human stress response-related gene with a potential role in induced radioresistance. *Radiat. Res.* 152: 451-461.
2. Robson, T., et al. 2000. Increased repair and cell survival in cells treated with DIR1 antisense oligonucleotides: implications for induced radioresistance. *Int. J. Radiat. Biol.* 76: 617-623.
3. Xie, T., et al. 2003. Analysis of the gene-dense major histocompatibility complex class III region and its comparison to mouse. *Genome Res.* 13: 2621-2636.
4. Benzeno, S., et al. 2005. A novel WISp39 protein links Hsp 90 and p21 stability to the G₂/M checkpoint. *Cancer Biol. Ther.* 4: 376-378.
5. Jascur, T., et al. 2005. Regulation of p21^{WAF1/CIP1} stability by WISp39, a Hsp 90 binding TPR protein. *Mol. Cell* 17: 237-249.
6. McKeen, H.D., et al. 2008. A novel FK506-like binding protein interacts with the glucocorticoid receptor and regulates steroid receptor signaling. *Endocrinology* 149: 5724-5734.
7. McKeen, H.D., et al. 2010. FKBPL regulates estrogen receptor signaling and determines response to endocrine therapy. *Cancer Res.* 70: 1090-1100.
8. Sunnotel, O., et al. 2010. Alterations in the steroid hormone receptor co-chaperone FKBPL are associated with male infertility: a case-control study. *Reprod. Biol. Endocrinol.* 8: 22.

CHROMOSOMAL LOCATION

Genetic locus: FKBPL (human) mapping to 6p21.33; Fkbpl (mouse) mapping to 17 B1.

SOURCE

FKBPL (S-13) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of FKBPL 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 μ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-161054 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

FKBPL (S-13) is recommended for detection of FKBPL of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g 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).

FKBPL (S-13) is also recommended for detection of FKBPL in additional species, including canine, bovine and porcine.

Suitable for use as control antibody for FKBPL siRNA (h): sc-95250, FKBPL siRNA (m): sc-145194, FKBPL shRNA Plasmid (h): sc-95250-SH, FKBPL shRNA Plasmid (m): sc-145194-SH, FKBPL shRNA (h) Lentiviral Particles: sc-95250-V and FKBPL shRNA (m) Lentiviral Particles: sc-145194-V.

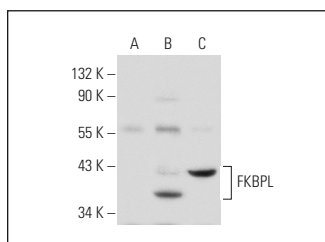
Molecular Weight of FKBPL: 48 kDa.

Positive Controls: T24 cell lysate: sc-2292 or SK-BR-3 cell lysate: sc-2218.

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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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.

DATA



FKBPL (S-13): sc-161054. Western blot analysis of FKBPL expression in COLO 320DM (A), T24 (B) and SK-BR-3 (C) whole cell lysates.

RESEARCH USE

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