SANTA CRUZ BIOTECHNOLOGY, INC.

FR (C-17): sc-16388

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Folate is an essential vitamin that must be obtained from food intake through intestinal absorption in mammals. Folate and reduced folic acid derivatives bind to the folate receptor (FR) family, which mediates the endocytosis of 5-methyltetrahydofolate into the cell. The folate receptors consist of five members, α, β, γ, γ' (which is produced by alternative splicing) and δ. α-FR and β-FR are attached to the membrane by a GPI anchor and are expressed in malignant tissues of epithelial and nonepithelial origin, respectively. γ-FR is expressed in tissues of hematopoietic origin, such as spleen, thymus and bone marrow, but the expression pattern of δ-FR is elusive, which suggests that it is highly restricted both spatially and temporally. α-FR is used as a highly selective tumor marker and may be targeted for the delivery of therapeutic compounds to tumor cells by coupling to derivatives of folic acid.

REFERENCES

1. Prasad, P.D., et al. 1994. Selective expression of the high-affinity isoform of the folate receptor (α-FR) in the human placental syncytiotrophoblast and choriocarcinoma cells. Biochim. Biophys. Acta 1223: 71-75.
2. Shen, F., et al. 1995. Folate receptor type γ is primarily a secretory protein due to lack of an efficient signal for glycosylphosphatidylinositol modification: protein characterization and cell type specificity. Biochemistry 34: 5660-5665.
3. Wang, H., et al. 1998. Structure and regulation of a polymorphic gene encoding folate receptor type γ/γ'. Nucleic Acids Res. 26: 2132-2142.
4. Wang, H., et al. 2000. Differentiation-independent retinoid induction of folate receptor type β, a potential tumor target in myeloid leukemia. Blood 96: 3529-3536.

CHROMOSOMAL LOCATION

Genetic locus: FOLR1/FOLR2/FOLR3 (human) mapping to 11q13.4; Folr1/Folr2 (mouse) mapping to 7 E3.

SOURCE

FR (C-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of FR 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-16388 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

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.

APPLICATIONS

FR (C-17) is recommended for detection of α, β and γ-FR of human origin and to a lesser extent, β-FR of mouse and rat origin by Western Blotting (starting dilution 1:200, 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).

FR (C-17) is also recommended for detection of α, β and γ-FR in additional species, including equine, canine, bovine and porcine.

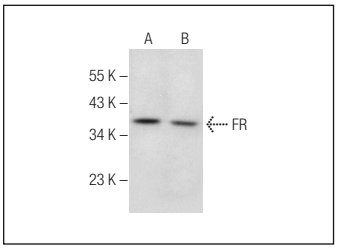
Molecular Weight of mature glycoprotein FRα: 36-39 kDa.

Positive Controls: JAR cell lysate: sc-2276, JEG-3 whole cell lysate or mouse placenta tissue extract: sc-364247.

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



FR (C-17): sc-16388. Western blot analysis of FR expression in JAR (**A**) and JEG-3 (**B**) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Tessner, T.G., et al. 2003. Basic fibroblast growth factor upregulates cyclooxygenase-2 in I407 cells through p38 MAP kinase. Am. J. Physiol. Gastrointest. Liver Physiol. 284: G269-G279.