

FAP α (SS-13): sc-100528



The Power to Question

BACKGROUND

FAP α , or seprase, is a 760 amino acid protein encoded by the human gene FAP and belongs to the peptidase S9B family. FAP α may have a role in tissue remodeling during development and wound healing so it is possible FAP α may contribute to invasiveness of malignant cancers. It degrades gelatin and heat-denatured type I and type IV collagen, but not native type I or type IV collagen. It also does not cleave Laminin, Fibronectin, fibrin or casein. FAP α is a single-pass type II membrane protein found on cell surface lamellipodia, invadopodia and on shed vesicles. FAP α is usually found as a glycosylated homodimer or heterodimer with DPP4. The FAP α monomer is an inactive form.

REFERENCES

1. Aertgeerts, K., et al. 2005. Structural and kinetic analysis of the substrate specificity of human fibroblast activation protein α . J. Biol. Chem. 280: 19441-19444.
2. Dolznig, H., et al. 2005. Characterization of cancer stroma markers: in silico analysis of an mRNA expression database for fibroblast activation protein and endosialin. Cancer Immun. 5: 10.

CHROMOSOMAL LOCATION

Genetic locus: FAP (human) mapping to 2q24.2.

SOURCE

FAP α (SS-13) is a mouse monoclonal antibody raised against a partial recombinant protein mapping to the internal region of FAP α of human origin.

PRODUCT

Each vial contains 100 μ g IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

FAP α (SS-13) is recommended for detection of FAP α of 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)] and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for FAP α siRNA (h): sc-62292, FAP α shRNA Plasmid (h): sc-62292-SH and FAP α shRNA (h) Lentiviral Particles: sc-62292-V.

Molecular Weight of FAP α : 88 kDa.

Positive Controls: Hep G2 cell lysate: sc-2227 or WI-38 whole cell lysate: sc-364260.

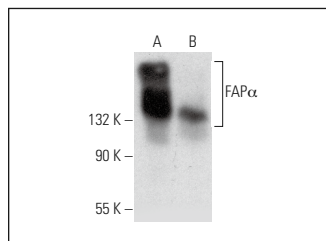
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml).

STORAGE

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

DATA



FAP α (SS-13): sc-100528. Western blot analysis of FAP α expression in Hep G2 (A) and WI-38 (B) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Ding, L., et al. 2014. Impact of fibroblast activation protein on osteosarcoma cell lines *in vitro*. Oncol. Lett. 7: 699-704.
2. Jia, J., et al. 2014. FAP- α (fibroblast activation protein- α) is involved in the control of human breast cancer cell line growth and motility via the FAK pathway. BMC Cell Biol. 15: 16.
3. Vivacqua, A., et al. 2018. miR-338-3p is regulated by estrogens through GPER in breast cancer cells and cancer-associated fibroblasts (CAFs). Cells 7: 203.
4. Vivacqua, A., et al. 2019. Differential microRNA landscape triggered by estrogens in cancer associated fibroblasts (CAFs) of primary and metastatic breast tumors. Cancers 11: 412.
5. Hintz, H.M., et al. 2020. Imaging fibroblast activation protein α improves diagnosis of metastatic prostate cancer with positron emission tomography. Clin. Cancer Res. 26: 4882-4891.
6. Di Donato, M., et al. 2021. The androgen receptor/filamin A complex as a target in prostate cancer microenvironment. Cell Death Dis. 12: 127.
7. Díaz-Maroto, N.G., et al. 2021. The blockade of tumoral IL1 β -mediated signaling in normal colonic fibroblasts sensitizes tumor cells to chemotherapy and prevents inflammatory CAF activation. Int. J. Mol. Sci. 22: 4960.
8. Ibba, M.L., et al. 2023. STAT3 silencing by an aptamer-based strategy hampers the crosstalk between NSCLC cells and cancer-associated fibroblasts. Mol. Ther. Nucleic Acids 32: 111-126.
9. Kim, S.M., et al. 2024. Enzymatic activity of fibroblast activation protein- α is essential for TGF- β 1-induced fibroblastic differentiation of human periodontal ligament cells. Exp. Cell Res. 442: 114230.

RESEARCH USE

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