SANTA CRUZ BIOTECHNOLOGY, INC.

FAPα (SS-13): sc-100528

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

FAPα, or seprase, is a 760 amino acid protein encoded by the human gene FAP and belongs to the peptidase S9B family. FAPα may have a role in tissue remodeling during development and wound healing so it is possible FAPα 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. FAPα is a single-pass type II membrane protein found on cell surface lamellipodia, invadopodia and on shed vesicles. FAPα is usually found as a glycosylated homodimer or heterodimer with DPP4. The FAPα 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. Kelly, T. 2005. Fibroblast activation protein α and dipeptidyl peptidase IV (CD26): cell-surface proteases that activate cell signaling and are potential targets for cancer therapy. Drug Resist. Updat. 8: 51-58.
3. 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.
4. Iwasa, S., et al. 2005. Increased expression of seprase, a membrane-type serine protease, is associated with lymph node metastasis in human colorectal cancer. Cancer Lett. 227: 229-236.

CHROMOSOMAL LOCATION

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

SOURCE

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

PRODUCT

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

APPLICATIONS

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

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

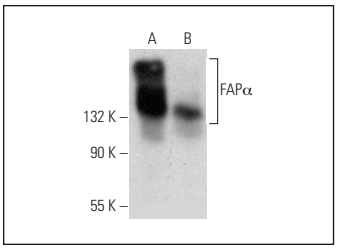
Molecular Weight of FAPα: 88 kDa.

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-IgGκ BP-HRP: sc-516102 or m-IgGκ 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).

DATA



FAPα (SS-13): sc-100528. Western blot analysis of FAPα 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. Santolla, M.F., et al. 2018. miR-221 stimulates breast cancer cells and cancer-associated fibroblasts (CAFs) through selective interference with the A20/c-Rel/CTGF signaling. J. Exp. Clin. Cancer Res. 37: 94.
4. 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.
5. 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.
6. Hintz, H.M., et al. 2020. Imaging fibroblast activation protein α improves diagnosis of metastatic prostate cancer with positron emission tomography. Clin. Cancer Res. E-published.

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.