# Human Fibroblast Activation Protein α/FAP Antibody

Monoclonal Mouse $IgG_1$ Clone # 427819

Catalog Number: MAB3715

## DESCRIPTION

| | |
|---|---|
| **Species Reactivity** | Human |
| **Specificity** | Detects human Fibroblast Activation Protein α/FAP in direct ELISAs. In direct ELISAs, no cross-reactivity with recombinant human DPP6 is observed. |
| **Source** | Monoclonal Mouse $IgG_1$ Clone # 427819 |
| **Purification** | Protein A or G purified from hybridoma culture supernatant |
| **Immunogen** | *S. frugiperda* insect ovarian cell line *Sf* 21-derived recombinant human Fibroblast Activation Protein α/FAP<br>Leu26-Asp760<br>Accession # Q12884 |
| **Formulation** | Lyophilized from a 0.2 μm filtered solution in PBS with Trehalose. See Certificate of Analysis for details.<br>*Small pack size (-SP) is supplied as a 0.2 μm filtered solution in PBS. |

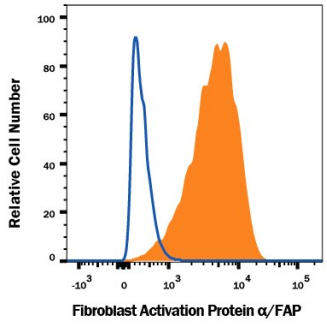
## APPLICATIONS

**Please Note:** *Optimal dilutions should be determined by each laboratory for each application. General Protocols are available in the Technical Information section on our website.*

| | Recommended Concentration | Sample |
|---|---|---|
| **Flow Cytometry** | 0.25 µg/$10^6$ cells | See Below |
| ***Human Fibroblast Activation Protein α/FAP Sandwich Immunoassay*** | | **Reagent** |
| **ELISA Capture** | 2-8 µg/mL | Human Fibroblast Activation Protein α/FAP Antibody (Catalog # MAB3715) |
| **ELISA Detection** | 0.1-0.4 µg/mL | Human Fibroblast Activation Protein α/FAP Biotinylated Antibody (Catalog # BAF3715) |
| **Standard** | | Recombinant Human Fibroblast Activation Protein α/FAP (Catalog # 3715-SE) |
| **CyTOF-ready** | Ready to be labeled using established conjugation methods. No BSA or other carrier proteins that could interfere with conjugation. | |

## DATA

**Flow Cytometry**




**Detection of Fibroblast Activation Protein α/FAP in WI-38 Human Cell Line by Flow Cytometry.** WI-38 human lung fibroblast cell line was stained with Mouse Anti-Human Fibroblast Activation Protein α/FAP Monoclonal Antibody (Catalog # MAB3715, filled histogram) or isotype control antibody (Catalog # MAB002, open histogram), followed by Phycoerythrin-conjugated Anti-Mouse IgG Secondary Antibody (Catalog # F0102B). View our protocol for Staining Membrane-associated Proteins.

## PREPARATION AND STORAGE

| | |
|---|---|
| **Reconstitution** | Reconstitute at 0.5 mg/mL in sterile PBS. |
| **Shipping** | The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.<br>*Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C |
| **Stability & Storage** | **Use a manual defrost freezer and avoid repeated freeze-thaw cycles.**<br>● 12 months from date of receipt, -20 to -70 °C as supplied.<br>● 1 month, 2 to 8 °C under sterile conditions after reconstitution.<br>● 6 months, -20 to -70 °C under sterile conditions after reconstitution. |



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## BACKGROUND

FAP (also known as Seprase) is a 97 kDa Type II transmembrane serine protease that is structurally related to Dipeptidyl Peptidase IV (DPPIV) (1). FAP has substrate specificity similar to DPPIV, which is specific for N-terminal Xaa-Pro sequences, but FAP is also an endopeptidase able to degrade gelatin and Type I Collagen (2). The enzymatically active form of FAP is a dimer that migrates at ~170 kDa. It is associated with multiple integral membrane proteins such as Integrin $\alpha_3\beta_1$, UPA and DPPIV (3,4). FAP has a restricted tissue distribution. It is occasionally detected in fibroblasts and pancreatic islet cells, but is highly expressed on reactive stromal fibroblasts in epithelial cancers, in granulation tissue during wound healing, and in bone and soft tissue sarcomas (4-6). Because of its expression patterns and enzymatic activities, FAP is believed to play roles in tumor invasion, tissue remodeling, and wound repair. The 760 amino acid (aa) human FAP contains a 735 aa extracellular domain that is glycosylated and necessary for activity (4). It shares 90% aa identity with mouse and rat FAP. A reported 672 aa splicing variant diverges prior to the active site charge relay residues at the C-terminus.

**References:**


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4. O'Brien, P. and B.F. O'Connor (2008) Biochim. Biophys. Acta **1784**:1130.
5. Garin-Chesa, P. *et al.* (1990) Proc. Natl. Acad. Sci. USA **87**:7235.
6. Rettig, W.J. *et al.* (1988) Proc. Natl. Acad. Sci. USA **85**:3110.




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