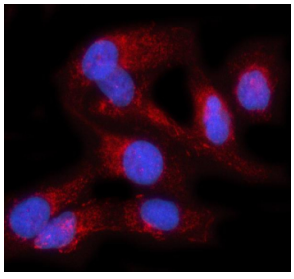
PRAG1 Antibody / Pragmin / PEAK1-related kinase-activating pseudokinase 1 (FY12864)

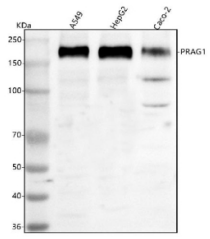
Catalog No.	Formulation	Size
FY12864	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml	100 ug

Bulk quote request

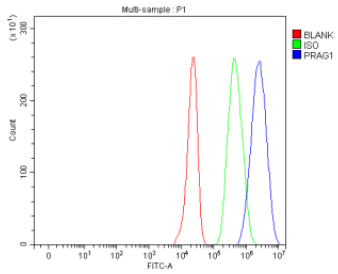
Availability	1-2 days
Species Reactivity	Human
Format	Lyophilized
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Immunogen affinity purified
Buffer	Each vial contains 4 mg Trehalose, 0.9 mg NaCl, 0.2 mg Na2HPO4.
UniProt	Q86YV5
Localization	Nucleus, Cell Junctions, possible Cytoplasm
Applications	Western Blot : 0.25-0.5ug/ml Immunocytochemistry : 5ug/ml Immunofluorescence : 5ug/ml Flow Cytometry : 1-3ug/million cells ELISA : 0.1-0.5ug/ml
Limitations	This PRAG1 antibody is available for research use only.



Immunofluorescent staining of PRAG1 using anti-PRAG1 antibody (red). PRAG1 was detected in an immunocytochemical section of human HELA cells. Enzyme antigen retrieval was performed using IHC enzyme antigen retrieval reagent for 15 mins. The cells were blocked with 10% goat serum. And then incubated with 5 ug/ml rabbit anti-PRAG1 antibody overnight at 4oC. Cy3 Conjugated Goat Anti-Rabbit IgG was used as secondary antibody at 1:500 dilution and incubated for 30 minutes at 37oC. The section was counterstained with DAPI nuclear stain (blue). Visualize using a fluorescence microscope and filter sets appropriate for the label used.



Western blot analysis of PRAG1 using anti-PRAG1 antibody. Lane 1: human whole cell lysates, Lane 2: human HepG2 whole cell lysates, Lane 3: human Caco-2 whole cell lysates. After electrophoresis, proteins were transferred to a nitrocellulose membrane at 150 mA for 50-90 minutes. Blocked the membrane with 5% non-fat milk/TBS for 1.5 hour at RT. The membrane was incubated with rabbit anti-PRAG1 antibody at 0.5 ug/ml overnight at 4oC, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-rabbit IgG-HRP secondary antibody at a dilution of 1:5000 for 1.5 hour at RT. The signal was developed using enhanced chemiluminescent. PRAG1 western blot of human cell lines shows a predominant band near ~200 kDa. Although the theoretical mass is ~150 kDa, PRAG1 commonly migrates higher due to extensive phosphorylation, glycosylation, and its proline-rich structure. The ~200 kDa band therefore corresponds to full-length, post-translationally modified PRAG1.



Flow Cytometry analysis of HepG2 cells using anti-PRAG1 antibody. Overlay histogram showing HepG2 cells stained with (Blue line). To facilitate intracellular staining, cells were fixed with 4% paraformaldehyde and permeabilized with permeabilization buffer. The cells were blocked with 10% normal goat serum. And then incubated with rabbit anti-PRAG1 antibody (1 ug/million cells) for 30 min at 20oC. DyLight 488 conjugated goat anti-rabbit IgG (5-10 ug/million cells) was used as secondary antibody for 30 minutes at 20oC. Isotype control antibody (Green line) was rabbit IgG (1 ug/million cells) used under the same conditions. Unlabelled sample (Red line) was also used as a control.

Description

PRAG1 antibody detects PEAK1-related, actin-binding guanine nucleotide exchange factor, also called Pragmin, a cytoskeletal and signaling adaptor involved in focal adhesion dynamics, actin organization, and cell migration. Encoded by the PRAG1 gene on chromosome 8q24.3, this multidomain protein acts as a nonreceptor tyrosine kinase scaffold that integrates signals from growth factor receptors and integrins to regulate cytoskeletal remodeling and motility. PRAG1 plays an important role in developmental morphogenesis and cancer cell invasion.

Structurally, PRAG1 contains an N-terminal actin-binding domain, a proline-rich region that interacts with SH3 domain-containing proteins, and multiple tyrosine phosphorylation motifs that recruit Src family kinases. Although it lacks intrinsic kinase activity, PRAG1 serves as a platform that enhances activation of FAK, Src, and downstream MAPK signaling, linking mechanical and biochemical cues during adhesion turnover. Its localization to focal adhesions and actin stress fibers reflects its role in maintaining cellular structure and migration capacity.

The PRAG1 antibody is widely used in cancer, developmental biology, and cytoskeletal signaling research to investigate adhesion signaling, actin dynamics, and metastatic potential. Western blot analysis detects a 170 kilodalton band corresponding to PRAG1, while immunofluorescence shows peripheral staining at focal adhesion sites and along actin filaments. This antibody supports studies examining integrin-mediated signaling and tumor cell invasion mechanisms.

Aberrant expression of PRAG1 contributes to epithelial-mesenchymal transition (EMT), tumor metastasis, and angiogenesis. Elevated PRAG1 levels enhance migration and invasion by promoting FAK/Src complex activation and actin remodeling. Conversely, depletion of PRAG1 suppresses motility and reduces metastatic spread. The PRAG1 antibody provides an essential tool for dissecting these molecular pathways and evaluating PRAG1 as a potential therapeutic target in oncology. NSJ Bioreagents validates this antibody for its applications, ensuring dependable detection in signaling and cytoskeletal research.

Application Notes

Optimal dilution of the PRAG1 antibody should be determined by the researcher.

Immunogen

E.coli-derived human PRAG1 recombinant protein (Position: H2-V1104) was used as the immunogen for the PRAG1 antibody.

Storage

After reconstitution, the PRAG1 antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.