

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human FAK in Western blots.
Source	Monoclonal Mouse IgG _{2B} Clone # 495919
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	<i>E. coli</i> -derived recombinant human FAK Asp213-Thr412 Accession # Q05397
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied either lyophilized or as a 0.2 µm filtered solution in PBS.

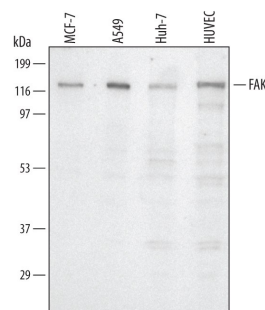
APPLICATIONS

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
Western Blot	2 µg/mL	See Below
Immunohistochemistry	8-25 µg/mL	See Below
Simple Western	20 µg/mL	MCF-7 human breast cancer cell line and A549 human lung carcinoma cell line,
Knockout Validated	FAK is specifically detected in HEK293T human embryonic kidney parental cell line but is not detectable in FAK knockout HEK293T cell line.	

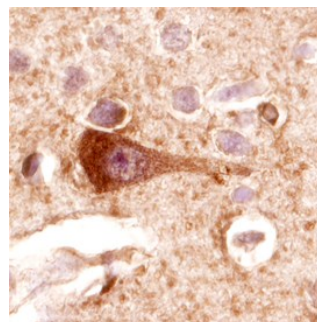
DATA

Western Blot



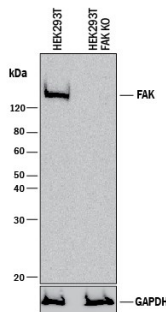
Detection of Human FAK by Western Blot. Western blot shows lysates of MCF-7 human breast cancer cell line, A549 human lung carcinoma cell line, Huh-7 human hepatoma cell line, and HUVEC human umbilical vein endothelial cells. PVDF membrane was probed with 2 µg/mL of Human FAK Monoclonal Antibody (Catalog # MAB4467) followed by HRP-conjugated Anti-Mouse IgG Secondary Antibody (Catalog # HAF007). A specific band was detected for FAK at approximately 125 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 3.

Immunohistochemistry



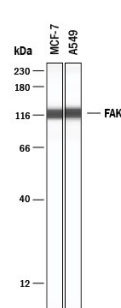
FAK in Human Brain. FAK was detected in immersion fixed paraffin-embedded sections of human brain (hippocampus) using Human FAK Monoclonal Antibody (Catalog # MAB4467) at 25 µg/mL overnight at 4 °C. Tissue was stained using the Anti-Mouse HRP-DAB Cell & Tissue Staining Kit (brown; Catalog # CTS002) and counterstained with hematoxylin (blue). View our protocol for [Chromogenic IHC Staining of Paraffin-embedded Tissue Sections](#).

Knockout Validated



Western Blot Shows Human FAK Specificity by Using Knockout Cell Line. Western blot shows lysates of HEK293T human embryonic kidney parental cell line and FAK knockout HEK293T cell line (KO). PVDF membrane was probed with 2 µg/mL of Mouse Anti-Human FAK Monoclonal Antibody (Catalog # MAB4467) followed by HRP-conjugated Anti-Mouse IgG Secondary Antibody (Catalog # HAF018). A specific band was detected for FAK at approximately 135 kDa (as indicated) in the parental HEK293T cell line, but is not detectable in knockout HEK293T cell line. GAPDH (Catalog # MAB5718) is shown as a loading control. This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 1.

Simple Western



Detection of Human FAK by Simple Western™. Simple Western lane view shows lysates of MCF-7 human breast cancer cell line and A549 human lung carcinoma cell line, loaded at 0.2 mg/mL. A specific band was detected for FAK at approximately 120 kDa (as indicated) using 20 µg/mL of Mouse Anti-Human FAK Monoclonal Antibody (Catalog # MAB4467). This experiment was conducted under reducing conditions and using the 12-230 kDa separation system.



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. *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. <ul style="list-style-type: none"> 12 months from date of receipt, -20 to -70 °C as supplied. 1 month, 2 to 8 °C under sterile conditions after reconstitution. 6 months, -20 to -70 °C under sterile conditions after reconstitution.

BACKGROUND

Focal adhesion kinase 1 (FAK), also known as FAK1 and PTK2, is a ubiquitously expressed non-receptor protein tyrosine kinase that is concentrated in focal adhesions. This cellular localization is directed by a C-terminal 125 amino acid "Focal Adhesion Targeting" (FAT) sequence. FAK plays an important role in migration, cell spreading, differentiation and apoptosis. It associates with several different signaling proteins, such as Src-family PTKs, p130Cas, Shc, Grb2, PI 3-kinase, and Paxillin. These associations enable FAK to function within a network of integrin-stimulated signaling pathways, leading to the activation of targets such as the ERK and JNK mitogen-activated protein kinase pathways. Increased expression and/or activity of FAK in various cancers has been correlated with enhanced proliferation, migration and invasiveness of human tumor cells.