

DDEF2 (C-9): sc-374323

BACKGROUND

DDEF2 (ADP ribosylation factor [ARF]-GTPase-activating protein [GAP] containing SH3, ANK repeats, and PH domain, PAP, PAG2, AMAP1, ZG14P, centaurin β 4) is a phospholipid-dependent ADP-ribosylation factor (ARF) GTPase-activating protein (ARF-GAP) that binds to protein-tyrosine kinases Src and focal adhesion kinase. ARF family GTP-binding proteins are regulators of membrane traffic and cytoskeletal organization. Modulation of ARF activity by DDEF2 is important for the regulation of focal adhesion assembly and/or organization by influencing the mechanisms responsible for the recruitment and organization of focal adhesion proteins paxillin and FAK. In spreading platelets, most endogenous DDEF2 is localized at peripheral focal adhesions. Pyk2 directly phosphorylates DDEF2 on Tyrosine 308 and 782, and this event affects the phosphoinositide binding profile of DDEF2. DDEF2 is phosphorylated on tyrosine residues in cells expressing activated Src and tyrosine phosphorylation depends on a proline-rich class II Src SH3 binding site.

REFERENCES

1. Brown, M.T., et al. 1998. ASAP1, a phospholipid-dependent arf GTPase-activating protein that associates with and is phosphorylated by Src. *Mol. Cell. Biol.* 18: 7038-7051.
2. Randazzo, P.A., et al. 2000. The Arf GTPase-activating protein ASAP1 regulates the Actin cytoskeleton. *Proc. Natl. Acad. Sci. USA* 97: 4011-4016.
3. Kam, J.L., et al. 2000. Phosphoinositide-dependent activation of the ADP ribosylation factor GTPase-activating protein ASAP1. Evidence for the pleckstrin homology domain functioning as an allosteric site. *J. Biol. Chem.* 275: 9653-9663.
4. Furman, C., et al. 2002. DEF-1/ASAP1 is a GTPase-activating protein (GAP) for ARF1 that enhances cell motility through a GAP-dependent mechanism. *J. Biol. Chem.* 277: 7962-7969.

CHROMOSOMAL LOCATION

Genetic locus: ASAP2 (human) mapping to 2p25.1; Asap2 (mouse) mapping to 12 A1.2.

SOURCE

DDEF2 (C-9) is a mouse monoclonal antibody raised against amino acids 1-300 mapping at the N-terminus of DDEF2 of human origin

PRODUCT

Each vial contains 200 μ g IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

DDEF2 (C-9) is available conjugated to agarose (sc-374323 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-374323 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-374323 PE), fluorescein (sc-374323 FITC), Alexa Fluor® 488 (sc-374323 AF488), Alexa Fluor® 546 (sc-374323 AF546), Alexa Fluor® 594 (sc-374323 AF594) or Alexa Fluor® 647 (sc-374323 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-374323 AF680) or Alexa Fluor® 790 (sc-374323 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

DDEF2 (C-9) is recommended for detection of DDEF2 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

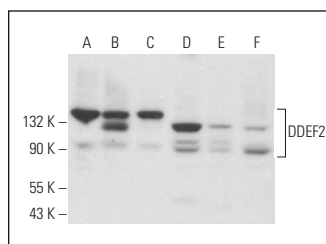
DDEF2 (C-9) is also recommended for detection of DDEF2 in additional species, including canine and porcine.

Suitable for use as control antibody for DDEF2 siRNA (h): sc-41694, DDEF2 siRNA (m): sc-41695, DDEF2 shRNA Plasmid (h): sc-41694-SH, DDEF2 shRNA Plasmid (m): sc-41695-SH, DDEF2 shRNA (h) Lentiviral Particles: sc-41694-V and DDEF2 shRNA (m) Lentiviral Particles: sc-41695-V.

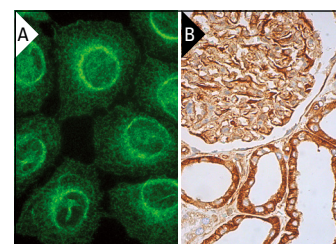
Molecular Weight of DDEF2: 130 kDa.

Positive Controls: Raji whole cell lysate: sc-364236, Ramos cell lysate: sc-2216 or WEHI-231 whole cell lysate: sc-2213.

DATA



DDEF2 (C-9): sc-374323. Western blot analysis of DDEF2 expression in Raji (A), Ramos (B), NAMALWA (C), WEHI-231 (D), EOC 20 (E) and L6 (F) whole cell lysates.



DDEF2 (C-9): sc-374323. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic and membrane localization (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human kidney tissue showing cytoplasmic and nuclear staining of cells in glomeruli and cytoplasmic staining of cells in tubules (B).

SELECT PRODUCT CITATIONS

1. Shi, H., et al. 2022. 1,25(OH)₂D₃ promotes macrophage efferocytosis partly by upregulating ASAP2 transcription via the VDR-bound enhancer region and ASAP2 may affect antiviral immunity. *Nutrients* 14: 4935.

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.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.