

# DDEF2 (V-16): sc-11541

## BACKGROUND

DDEF2 (ADP ribosylation factor [ARF]- GTPase-activating protein [GAP] containing SH3, ANK repeats, and PH domain, PAP, PAG2, AMAP1, ZG14P, centaurin β4) 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.
5. Liu, Y., et al. 2002. The association of ASAP1, an ADP ribosylation factor-GTPase activating protein, with focal adhesion kinase contributes to the process of focal adhesion assembly. *Mol. Biol. Cell* 13: 2147-2156.

## CHROMOSOMAL LOCATION

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

## SOURCE

DDEF2 (V-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of DDEF2 of human origin.

## PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-11541 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## RESEARCH USE

For research use only, not for use in diagnostic procedures.

## APPLICATIONS

DDEF2 (V-16) is recommended for detection of DDEF2 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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 (V-16) is also recommended for detection of DDEF2 in additional species, including equine, canine, bovine, porcine and avian.

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.

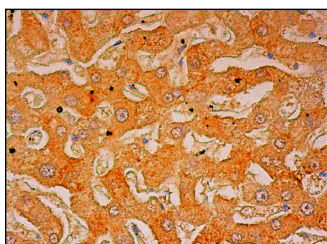
Molecular Weight of DDEF2: 130 kDa.

Positive Controls: KNRK whole cell lysate: sc-2214.

## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941. 3) Immunohistochemistry: use ImmunoCruz™: sc-2053 or ABC: sc-2023 goat IgG Staining Systems.

## DATA



DDEF2 (V-16): sc-11541. Immunoperoxidase staining of formalin fixed, paraffin-embedded human liver tissue showing cytoplasmic staining of hepatocytes.

## STORAGE

Store at 4° C, \*\*DO NOT FREEZE\*\*. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

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Try **DDEF2 (C-9): sc-374323**, our highly recommended monoclonal alternative to DDEF2 (V-16).