

DDEF1 (P-20): sc-66367

BACKGROUND

DDEF1 (development and differentiation enhancing factor 1), also known as ASAP1, AMAP1 or PAG2, is an ADP ribosylation factor (ARF)-GTPase activating protein (GAP) that interacts with various signal transduction proteins. Localized to the cytoplasm and to newly formed focal complexes at the cell periphery, DDEF1 coordinates with proteins such as ARF1, ARF5, ARF6 and SRK (ZAP-70) to influence growth and differentiation events. Through its interactions with these proteins, DDEF1 plays a key role in cell motility and regulation of Actin cytoskeletal remodeling, as well as in differentiation of adipocytes and fibroblasts. DDEF1 contains two ANK repeats, one ARF-GAP domain, one SH3 domain and one PH domain which is essential in the phosphoinositide-dependent regulation of ARFs. Overexpression of DDEF1 is thought to block the invasion and metastasis of breast cancer and high-grade uveal melanomas, suggesting a possible role as a therapeutic target and diagnostic marker for certain cancers.

REFERENCES

1. 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.
2. Onodera, Y., et al. 2005. Expression of AMAP1, an ARFGAP, provides novel targets to inhibit breast cancer invasive activities. *EMBO J.* 24: 963-973.
3. Ehlers, J.P., et al. 2005. DDEF1 is located in an amplified region of chromosome 8q and is overexpressed in uveal melanoma. *Clin. Cancer Res.* 11: 3609-3613.
4. Che, M.M., et al. 2005. Regulation of ASAP1 by phospholipids is dependent on the interface between the PH and ARFGAP domains. *Cell. Signal.* 17: 1276-1288.
5. Luo, R., et al. 2005. Mutational analysis of the ARF1*GTP/ ARFGAP interface reveals an ARF1 mutant that selectively affects the ARFGAP ASAP1. *Curr. Biol.* 15: 2164-2169.
6. Nie, Z., et al. 2006. A BAR domain in the N-terminus of the ARFGAP ASAP1 affects membrane structure and trafficking of epidermal growth factor receptor. *Curr. Biol.* 16: 130-139.

CHROMOSOMAL LOCATION

Genetic locus: DDEF1 (human) mapping to 8q24.21; Ddef1 (mouse) mapping to 15 D1.

SOURCE

DDEF1 (P-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of DDEF1 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-66367 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

DDEF1 (P-20) is recommended for detection of DDEF1 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

DDEF1 (P-20) is also recommended for detection of DDEF1 in additional species, including equine, canine, bovine and avian.

Suitable for use as control antibody for DDEF1 siRNA (h): sc-62196, DDEF1 siRNA (m): sc-62197, DDEF1 shRNA Plasmid (h): sc-62196-SH, DDEF1 shRNA Plasmid (m): sc-62197-SH, DDEF1 shRNA (h) Lentiviral Particles: sc-62196-V and DDEF1 shRNA (m) Lentiviral Particles: sc-62197-V.

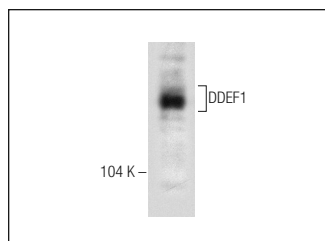
Molecular Weight of DDEF1: 125 kDa.

Positive Controls: IMR-32 cell lysate: sc-2409.

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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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.

DATA



DDEF1 (P-20): sc-66367. Western blot analysis of DDEF1 expression in IMR-32 whole cell lysate.

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 or our catalog for detailed protocols and support products.