

# DDEF1 (G-8): sc-377102

## BACKGROUND

DDEF1 (development and differentiation enhancing factor-like 1), also known as ACAP4, UPLC1, CENTB6 or ASAP3 (ArfGAP with SH3 domain, ankyrin repeat and PH domain 3), is a 903 amino acid cytoplasmic protein belonging to the subfamily of ADP-ribosylation factor (Arf) GTPase-activating proteins. DDEF1 contains two ANK repeats, an Arf-GAP domain and a PH domain, and is expressed in lung, liver, blood leukocytes and primary hepatocarcinoma. The Arf-GAP domain of DDEF1 catalyzes the hydrolysis of GTP bound to Arf proteins. DDEF1 promotes cell differentiation and migration, and has been implicated in the pathogenesis of hepatocellular carcinoma. Existing as two isoforms produced by alternative splicing events, DDEF1 is encoded by a gene located on human chromosome 1. Human chromosome 1 spans 260 million base pairs, contains over 3,000 genes and comprises nearly 8% of the human genome.

## REFERENCES

1. Jackson, T.R., et al. 2000. ACAPs are ARF6 GTPase-activating proteins that function in the cell periphery. *J. Cell Biol.* 151: 627-638.
2. Randazzo, P.A., et al. 2000. Molecular aspects of the cellular activities of ADP-ribosylation factors. *Sci. STKE* 2000: re1.
3. Okabe, H., et al. 2004. Isolation of development and differentiation enhancing factor-like 1 (DDEF1) as a drug target for hepatocellular carcinomas. *Int. J. Oncol.* 24: 43-48.
4. Randazzo, P.A., et al. 2004. Arf GAPs: multifunctional proteins that regulate membrane traffic and actin remodelling. *Cell. Signal.* 16: 401-413.
5. Sabe, H., et al. 2006. ArfGAP family proteins in cell adhesion, migration and tumor invasion. *Curr. Opin. Cell Biol.* 18: 558-564.
6. Fang, Z., et al. 2006. Proteomic identification and functional characterization of a novel ARF6 GTPase-activating protein, ACAP4. *Mol. Cell. Proteomics* 5: 1437-1449.
7. Randazzo, P.A., et al. 2007. Arf GAPs as regulators of the Actin cytoskeleton. *Biol. Cell* 99: 583-600.

## CHROMOSOMAL LOCATION

Genetic locus: ASAP3 (human) mapping to 1p36.12; Asap3 (mouse) mapping to 4 D3.

## SOURCE

DDEF1 (G-8) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 867-899 near the C-terminus of DDEF1 of mouse origin.

## PRODUCT

Each vial contains 200 µg IgG<sub>1</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-377102 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

## APPLICATIONS

DDEF1 (G-8) is recommended for detection of DDEF1 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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).

Suitable for use as control antibody for DDEF1 siRNA (h): sc-88264, DDEF1 siRNA (m): sc-142915, DDEF1 shRNA Plasmid (h): sc-88264-SH, DDEF1 shRNA Plasmid (m): sc-142915-SH, DDEF1 shRNA (h) Lentiviral Particles: sc-88264-V and DDEF1 shRNA (m) Lentiviral Particles: sc-142915-V.

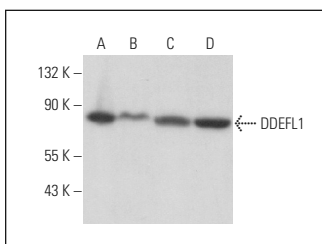
Molecular Weight of DDEF1: 99 kDa.

Positive Controls: DDEF1 (m): 293T Lysate: sc-125230, HeLa whole cell lysate: sc-2200 or Jurkat whole cell lysate: sc-2204.

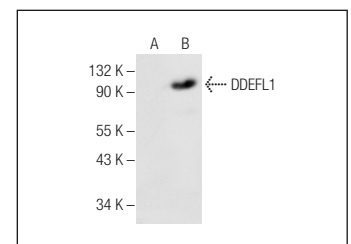
## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 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 m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

## DATA



DDEF1 (G-8): sc-377102. Western blot analysis of DDEF1 expression in HeLa (A), Jurkat (B), HL-60 (C) and Hep G2 (D) whole cell lysates.



DDEF1 (G-8): sc-377102. Western blot analysis of DDEF1 expression in non-transfected: sc-117752 (A) and mouse DDEF1 transfected: sc-125230 (B) 293T whole cell lysates.

## 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](http://www.scbt.com) for detailed protocols and support products.