

ORP-3 (G-5): sc-514097



The Power to Question

BACKGROUND

ORP-3 (OSBP-related protein 3), also known as OSBPL3 (oxysterol binding protein-like 3) or OSBP3, is an 887 amino acid protein that contains one PH domain and is thought to be involved in Actin cytoskeletal control, as well as in cell polarity and cell adhesion. Belonging to the OSBP family, ORP-3 exists as eight alternatively spliced isoforms, designated 1a-1d and 2a-2d, all of which are expressed in colon, lung, spleen, brain, thyroid, bone marrow and skeletal muscle, but are not present in liver and heart tissue. The gene encoding ORP-3 maps to human chromosome 7, which houses over 1,000 genes and comprises nearly 5% of the human genome. Defects in some of the genes localized to chromosome 7 have been linked to osteogenesis imperfecta, Williams-Beuren syndrome, Pendred syndrome, lissencephaly, citrullinemia and Shwachman-Diamond syndrome.

REFERENCES

1. Ishikawa, K., et al. 1998. Prediction of the coding sequences of unidentified human genes. X. The complete sequences of 100 new cDNA clones from brain which can code for large proteins *in vitro*. DNA Res. 5: 169-176.
2. Laitinen, S., et al. 1999. Family of human oxysterol binding protein (OSBP) homologues. A novel member implicated in brain sterol metabolism. J. Lipid Res. 40: 2204-2211.
3. Jaworski, C.J., et al. 2001. A family of 12 human genes containing oxysterol-binding domains. Genomics 78: 185-196.
4. Lehto, M., et al. 2001. The OSBP-related protein family in humans. J. Lipid Res. 42: 1203-1213.

CHROMOSOMAL LOCATION

Genetic locus: OSBPL3 (human) mapping to 7p15.3; Osbpl3 (mouse) mapping to 6 B2.3.

SOURCE

ORP-3 (G-5) is a mouse monoclonal antibody raised against amino acids 159-265 mapping within an internal region of ORP-3 of human origin.

PRODUCT

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

ORP-3 (G-5) is available conjugated to agarose (sc-514097 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-514097 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-514097 PE), fluorescein (sc-514097 FITC), Alexa Fluor® 488 (sc-514097 AF488), Alexa Fluor® 546 (sc-514097 AF546), Alexa Fluor® 594 (sc-514097 AF594) or Alexa Fluor® 647 (sc-514097 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-514097 AF680) or Alexa Fluor® 790 (sc-514097 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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RESEARCH USE

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

APPLICATIONS

ORP-3 (G-5) is recommended for detection of ORP-3 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 ORP-3 siRNA (h): sc-89680, ORP-3 siRNA (m): sc-151320, ORP-3 shRNA Plasmid (h): sc-89680-SH, ORP-3 shRNA Plasmid (m): sc-151320-SH, ORP-3 shRNA (h) Lentiviral Particles: sc-89680-V and ORP-3 shRNA (m) Lentiviral Particles: sc-151320-V.

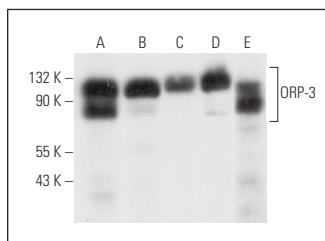
Molecular Weight of ORP-3 precursor: 103 kDa.

Positive Controls: NIH/3T3 whole cell lysate: sc-2210, AMJ2-C8 whole cell lysate: sc-364366 or A-431 whole cell lysate: sc-2201.

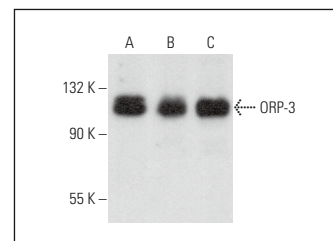
RECOMMENDED SUPPORT REAGENTS

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



ORP-3 (G-5): sc-514097. Western blot analysis of ORP-3 expression in NIH/3T3 (A), AMJ2-C8 (B), K-562 (C), RT-4 (D) and A-431 (E) whole cell lysates.



ORP-3 (G-5): sc-514097. Western blot analysis of ORP-3 expression in Y79 (A), RAW 264.7 (B) and 3T3-L1 (C) whole cell lysates.

SELECT PRODUCT CITATIONS

1. D'Souza, R.S., et al. 2020. Calcium-stimulated disassembly of focal adhesions mediated by an ORP3/IQSec1 complex. *Elife* 9: e54113.
2. Hao, N., et al. 2021. Clinical value and potential mechanisms of oxysterol-binding protein like 3 (OSBPL3) in human tumors. *Front. Mol. Biosci.* 8: 739978.

STORAGE

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