

Sur-8 (D-8): sc-514779

BACKGROUND

Sur-8, also known as SHOC2 (Soc-2 suppressor of clear homolog (*C. elegans*)) or SOC-2, is a 582 amino acid protein and a member of the SHOC2 family that translocates from cytoplasm to nucleus upon growth factor stimulation. Existing as two alternatively spliced isoforms, Sur-8 contains 20 leucine-rich repeats (LRR) and positively modulates Ras-MAPK signal flow. Aberrantly acquired N-myristoylation of SHOC2 is the cause of Noonan-like syndrome with loose anagen hair, a disorder characterized by slow-growing, easily pluckable, thin and sparse hair. Children with Noonan-like syndrome with loose anagen hair exhibit low-set and posteriorly rotated ears, high forehead, palpebral ptosis, hypertelorism, macrocephaly, pectus anomalie along with short and webbed neck. The gene encoding Sur-8 maps to human chromosome 10q25.2 and murine chromosome 19 D2.

REFERENCES

1. Sieburth, D.S., et al. 1998. Sur-8, a conserved Ras-binding protein with leucine-rich repeats, positively regulates Ras-mediated signaling in *C. elegans*. *Cell* 94: 119-130.
2. Selfors, L.M., et al. 1998. Soc-2 encodes a leucine-rich repeat protein implicated in fibroblast growth factor receptor signaling. *Proc. Natl. Acad. Sci. USA* 95: 6903-6908.
3. Li, W., et al. 2000. The leucine-rich repeat protein Sur-8 enhances MAP kinase activation and forms a complex with Ras and Raf. *Genes Dev.* 14: 895-900.
4. Dai, P., et al. 2006. ERBIN inhibits RAF activation by disrupting the Sur-8-Ras-Raf complex. *J. Biol. Chem.* 281: 927-933.

CHROMOSOMAL LOCATION

Genetic locus: SHOC2 (human) mapping to 10q25.2; Shoc2 (mouse) mapping to 19 D2.

SOURCE

Sur-8 (D-8) is a mouse monoclonal antibody raised against amino acids 5-304 mapping near the N-terminus of Sur-8 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.

Sur-8 (D-8) is available conjugated to agarose (sc-514779 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-514779 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-514779 PE), fluorescein (sc-514779 FITC), Alexa Fluor® 488 (sc-514779 AF488), Alexa Fluor® 546 (sc-514779 AF546), Alexa Fluor® 594 (sc-514779 AF594) or Alexa Fluor® 647 (sc-514779 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-514779 AF680) or Alexa Fluor® 790 (sc-514779 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

STORAGE

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

APPLICATIONS

Sur-8 (D-8) is recommended for detection of Sur-8 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 Sur-8 siRNA (h): sc-76615, Sur-8 siRNA (m): sc-76616, Sur-8 shRNA Plasmid (h): sc-76615-SH, Sur-8 shRNA Plasmid (m): sc-76616-SH, Sur-8 shRNA (h) Lentiviral Particles: sc-76615-V and Sur-8 shRNA (m) Lentiviral Particles: sc-76616-V.

Molecular Weight of Sur-8: 65 kDa.

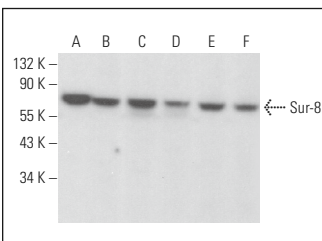
Positive Controls: U-2 OS cell lysate: sc-2295, MCF7 whole cell lysate: sc-2206 or Jurkat whole cell lysate: sc-2204.

RECOMMENDED SUPPORT REAGENTS

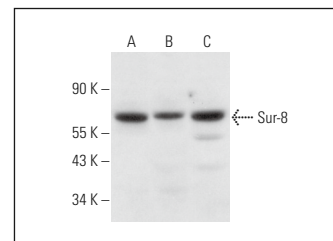
To ensure optimal results, the following support reagents are recommended:

- 1) Western Blotting: use m-IgGκ BPHRP: sc-516102 or m-IgGκ BPHRP (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 BPHRP: sc-516140 or m-IgGκ BPHRP: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



Sur-8 (D-8): sc-514779. Western blot analysis of Sur-8 expression in MCF7 (A), MDA-MB-231 (B), BT-20 (C), C32 (D), NIH/3T3 (E) and 3T3-L1 (F) whole cell lysates.



Sur-8 (D-8): sc-514779. Western blot analysis of Sur-8 expression in U-2 OS (A), MCF7 (B) and Jurkat (C) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Wang, T., et al. 2017. Gene essentiality profiling reveals gene networks and synthetic lethal interactions with oncogenic Ras. *Cell* 168: 890-903.e15.
2. Vichas, A., et al. 2021. Integrative oncogene-dependency mapping identifies RIT1 vulnerabilities and synergies in lung cancer. *Nat. Commun.* 12: 4789.

RESEARCH USE

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

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