



# SZABO SCANDIC

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## Produktinformation



Forschungsprodukte & Biochemikalien



Zellkultur & Verbrauchsmaterial



Diagnostik & molekulare Diagnostik



Laborgeräte & Service

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### Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

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# Db<sub>s</sub> (h): 293T Lysate: sc-159837

## BACKGROUND

The Dbl family act as guanine nucleotide exchange factors (GEFs) specific for Rho guanosine triphosphatases (GTPases). They regulate Rho GTPase function by stimulating formation of the active, GTP-bound state. All Dbl family members invariably possess a tandem domain structure, which consists of a Dbl homology (DH) catalytic domain followed by a pleckstrin homology (PH) regulatory domain. Db<sub>s</sub> (for Dbl's big sister) differs from Dbl by the addition of an amino-terminal extension and a carboxy-terminal SH3 domain. Unlike Dbl, it also requires the presence of the PH domain for the intrinsic catalytic activity of the DH domain. The expression of Db<sub>s</sub> is high in several tissues, including brain, and low in thymus and spleen. Db<sub>s</sub> exhibits guanine nucleotide exchange activity for Rho A and Cdc42 to mediate growth deregulation. Db<sub>s</sub> activity involves multiple signaling pathways that include activation of the Elk-1, Jun and NFκB transcription factors and stimulation of transcription from the cyclin D1 promoter.

## REFERENCES

- Whitehead, I., Kirk, H. and Kay, R. 1995. Retroviral transduction and oncogenic selection of a cDNA encoding Db<sub>s</sub>, a homolog of the Dbl guanine nucleotide exchange factor. *Oncogene* 10: 713-721.
- Whitehead, I.P., Lambert, Q.T., Glaven, J.A., Abe, K., Rossman, K.L., Mahon, G.M., Trzaskos, J.M., Kay, R., Campbell, S.L. and Der C.J. 1999. Dependence of Dbl and Db<sub>s</sub> transformation on MEK and NFκB activation. *Mol. Cell. Biol.* 19: 7759-7770.
- Rossman, K.L., Worthylake, D.K., Snyder, J.T., Siderovski, D.P., Campbell, S.L. and Sondek, J. 2002. A crystallographic view of interactions between Db<sub>s</sub> and Cdc42: PH domain-assisted guanine nucleotide exchange. *EMBO J.* 21: 1315-1326.
- Rossman, K.L., Cheng, L., Mahon, G.M., Rojas, R.J., Snyder, J.T., Whitehead, I.P. and Sondek, J. 2003. Multifunctional roles for the PH domain of Db<sub>s</sub> in regulating Rho GTPase activation. *J. Biol. Chem.* 278: 18393-18400.
- Fuentes, E.J., Karnoub, A.E., Booden, M.A., Der, C.J. and Campbell, S.L. 2003. Critical role of the pleckstrin homology domain in Db<sub>s</sub> signaling and growth regulation. *J. Biol. Chem.* 278: 21188-21196.

## CHROMOSOMAL LOCATION

Genetic locus: MCF2L (human) mapping to 13q34.

## PRODUCT

Db<sub>s</sub> (h): 293T Lysate represents a lysate of human Db<sub>s</sub> transfected 293T cells and is provided as 100 μg protein in 200 μl SDS-PAGE buffer.

## STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.

## APPLICATIONS

Db<sub>s</sub> (h): 293T Lysate is suitable as a Western Blotting positive control for human reactive Db<sub>s</sub> antibodies.

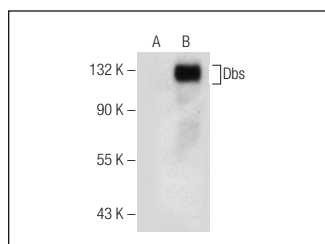
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

Db<sub>s</sub> (C-7): sc-376400 is recommended as a positive control antibody for Western Blot analysis of enhanced human Db<sub>s</sub> expression in Db<sub>s</sub> transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

## 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.

## DATA



Db<sub>s</sub> (C-7): sc-376400. Western blot analysis of Db<sub>s</sub> expression in non-transfected: sc-117752 (A) and human Db<sub>s</sub> transfected: sc-159837 (B) 293T whole cell lysates.

## RESEARCH USE

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