

# DbS (H-90): sc-292414

## 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. DbS (for Dbl's big sister), also known as Ost or MCF2L, 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 DbS is high in several tissues, including brain, and low in thymus and spleen. DbS exhibits guanine nucleotide exchange activity for Rho A and Cdc42 to mediate growth deregulation. DbS 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

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- 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 DbS and Cdc42: PH domain-assisted guanine nucleotide exchange. *EMBO J.* 21: 1315-1326.
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- 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 DbS signaling and growth regulation. *J. Biol. Chem.* 278: 21188-21196

## CHROMOSOMAL LOCATION

Genetic locus: MCF2L (human) mapping to 13q34; MCF2l (mouse) mapping to 8 A2.

## SOURCE

DbS (H-90) is a rabbit polyclonal antibody raised against amino acids 288-377 mapping within an internal region of DbS 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.

## RESEARCH USE

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

## APPLICATIONS

DbS (H-90) is recommended for detection of DbS 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).

Suitable for use as control antibody for DbS siRNA (h): sc-41728, DbS siRNA (m): sc-41729, DbS shRNA Plasmid (h): sc-41728-SH, DbS shRNA Plasmid (m): sc-41729-SH, DbS shRNA (h) Lentiviral Particles: sc-41728-V and DbS shRNA (m) Lentiviral Particles: sc-41729-V.

Molecular Weight of DbS: 128 kDa.

## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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 goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

## STORAGE

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

## PROTOCOLS

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