

# Dullard (T-20): sc-82585

## BACKGROUND

In eukaryotes, the phosphorylation and dephosphorylation of proteins on serine and threonine residues is an essential means of regulating a broad range of cellular functions, including division, homeostasis and apoptosis. A group of proteins that are intimately involved in this process are the protein phosphatases. Dullard, also known as NET56, is a 244 amino acid single-pass membrane protein that localizes to both the nucleus and the endoplasmic reticulum and contains one FCP1 homology domain. Functioning as a serine/threonine phosphatase, Dullard catalyses the dephosphorylation of target proteins and is thought to be required for proper nuclear membrane morphology. Human Dullard shares 92% sequence identity with its zebrafish counterpart, suggesting a conserved role between species.

## REFERENCES

1. Satow, R., Chan, T.C. and Asashima, M. 2002. Molecular cloning and characterization of dullard: a novel gene required for neural development. *Biochem. Biophys. Res. Commun.* 295: 85-91.
2. Satow, R., Kurisaki, A., Chan, T.C., Hamazaki, T.S. and Asashima, M. 2006. Dullard promotes degradation and dephosphorylation of BMP receptors and is required for neural induction. *Dev. Cell* 11: 763-774.
3. Kondo, M. 2007. Bone morphogenetic proteins in the early development of zebrafish. *FEBS J.* 274: 2960-2967.
4. Kim, Y., Gentry, M.S., Harris, T.E., Wiley, S.E., Lawrence, J.C. and Dixon, J.E. 2007. A conserved phosphatase cascade that regulates nuclear membrane biogenesis. *Proc. Natl. Acad. Sci. USA* 104: 6596-6601.
5. Online Mendelian Inheritance in Man, OMIM™. 2007. Johns Hopkins University, Baltimore, MD. MIM Number: 610684. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>

## CHROMOSOMAL LOCATION

Genetic locus: DULLARD (human) mapping to 17p13.1; Dullard (mouse) mapping to 11 B3.

## SOURCE

Dullard (T-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of Dullard 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.

Blocking peptide available for competition studies, sc-82585 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## 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.

## APPLICATIONS

Dullard (T-20) is recommended for detection of Dullard 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 Dullard siRNA (h): sc-77190, Dullard siRNA (m): sc-77191, Dullard shRNA Plasmid (h): sc-77190-SH, Dullard shRNA Plasmid (m): sc-77191-SH, Dullard shRNA (h) Lentiviral Particles: sc-77190-V and Dullard shRNA (m) Lentiviral Particles: sc-77191-V.

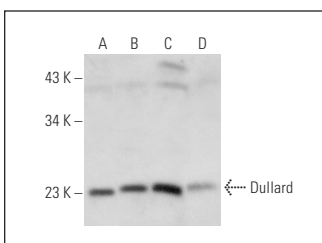
Molecular Weight of Dullard: 28 kDa.

Positive Controls: L6 whole cell lysate: sc-364196, L8 cell lysate: sc-3807 or Sol8 cell lysate: sc-2249.

## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (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 donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

## DATA



Dullard (T-20): sc-82585. Western blot analysis of Dullard expression in L6 (A), L8 (B), Sol8 (C) and C2C12 (D) whole cell lysates.

## PROTOCOLS

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