

DDR1 (C-20): sc-532

BACKGROUND

The majority of the large number of receptor tyrosine kinases that have been identified can be categorized into distinct families based on the structure of their extracellular domains. Only a limited number of ligands for the receptors have been described, and while the majority of the ligands identified are soluble factors, an increasing number of receptors have been shown to bind to cell-surface molecules. Discoidin domain receptor 1 (DDR1), previously identified as Cak, for cell adhesion kinase (and also designated MCK-10, EDDR1, NEP, Ptk-3, RTK6, trk E or NTRK4) and discoidin domain receptor 2 (DDR2) comprise a new family of receptor tyrosine kinases involved in cell-cell interactions. Both DDR1 and DDR2 have been shown to be activated by collagen. Evidence suggests that a docking site for the Shc phosphotyrosine binding domain is phosphorylated in response to activation of DDR1 by collagen, whereas collagen activation of DDR2 results in upregulation of matrix metalloproteinase-1 expression.

CHROMOSOMAL LOCATION

Genetic locus: DDR1 (human) mapping to 6p21.33; Ddr1 (mouse) mapping to 17 B1.

SOURCE

DDR1 (C-20) is available as either rabbit (sc-532) or goat (sc-532-G) polyclonal affinity purified antibody raised against a peptide mapping at the C-terminus of DDR1 of human origin.

PRODUCT

Each vial contains either 100 µg (sc-532) or 200 µg (sc-532-G) IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

DDR1 (C-20) is available conjugated to agarose (sc-532 AC), 500 µg/0.25 ml agarose in 1 ml, for IP.

Blocking peptide available for competition studies, sc-532 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

DDR1 (C-20)-G is recommended for detection of DDR1 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

DDR1 (C-20) is also recommended for detection of DDR1 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for DDR1 siRNA (h): sc-35187, DDR1 siRNA (m): sc-35188, DDR1 shRNA Plasmid (h): sc-35187-SH, DDR1 shRNA Plasmid (m): sc-35188-SH, DDR1 shRNA (h) Lentiviral Particles: sc-35187-V and DDR1 shRNA (m) Lentiviral Particles: sc-35188-V.

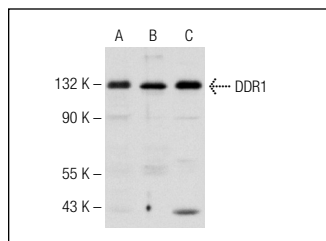
Molecular Weight of non-glycosylated DDR1: 100 kDa.

Molecular Weight of glycosylated DDR1: 125 kDa.

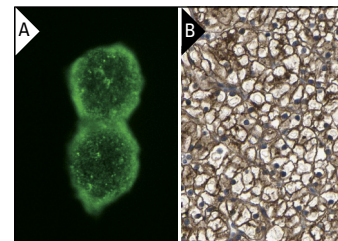
STORAGE

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

DATA



DDR1 (C-20): sc-532. Western blot analysis of discoidin domain receptor 1 (DDR1) expression in SK-BR-3 (A), ZR-75-1 (B) and A-431 (C) whole cell lysates.



DDR1 (C-20): sc-532. Immunofluorescence staining of methanol-fixed A-431 cells showing membrane localization (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human parathyroid gland tissue showing membrane staining of glandular cells. Kindly provided by The Swedish Human Protein Atlas (HPA) program (B).

SELECT PRODUCT CITATIONS

1. Vogel, W., et al. 2001. Discoidin domain receptor 1 tyrosine kinase has an essential role in mammary gland development. *Mol. Cell. Biol.* 21: 2906-2917.
2. Alves, F., et al. 2001. Identification of two novel, kinase-deficient variants of discoidin domain receptor 1: differential expression in human colon cancer cell lines. *FASEB J.* 15: 1321-1323.
3. Hou, G., et al. 2001. The discoidin domain receptor tyrosine kinase DDR1 in arterial wound repair. *J. Clin. Invest.* 107: 727-735.
4. Yeh, Y.C., et al. 2011. DDR1 triggers epithelial cell differentiation by promoting cell adhesion through stabilization of E-cadherin. *Mol. Biol. Cell* 22: 940-953.
5. Valencia, K., et al. 2012. Inhibition of collagen receptor discoidin domain receptor-1 (DDR1) reduces cell survival, homing, and colonization in lung cancer bone metastasis. *Clin. Cancer Res.* 18: 969-980.
6. Kerroch, M., et al. 2012. Genetic inhibition of discoidin domain receptor 1 protects mice against crescentic glomerulonephritis. *FASEB J.* 26: 4079-4091.
7. Roig, B., et al. 2012. The discoidin domain receptor 1 gene has a functional A2RE sequence. *J. Neurochem.* 120: 408-418.

RESEARCH USE

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



Try **DDR1 (C-6): sc-374618** or **DDR1 (D-10): sc-390268**, our highly recommended monoclonal alternatives to DDR1 (C-20). Also, for AC, HRP, FITC, PE, Alexa Fluor[®] 488 and Alexa Fluor[®] 647 conjugates, see **DDR1 (C-6): sc-374618**.