SANTA CRUZ BIOTECHNOLOGY, INC.

DDR2 (N-20): sc-7555

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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, NTRK4, RTK6 or trk E, 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: DDR2 (human) mapping to 1q23.3; Ddr2 (mouse) mapping to 1 H3.

SOURCE

DDR2 (N-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of DDR2 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-7555 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

DDR2 (N-20) is recommended for detection of DDR2 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).

DDR2 (N-20) is also recommended for detection of DDR2 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for DDR2 siRNA (h): sc-39922, DDR2 siRNA (m): sc-39923, DDR2 shRNA Plasmid (h): sc-39922-SH, DDR2 shRNA Plasmid (m): sc-39923-SH, DDR2 shRNA (h) Lentiviral Particles: sc-39922-V and DDR2 shRNA (m) Lentiviral Particles: sc-39923-V.

Molecular Weight of DDR2: 116 kDa.

Positive Controls: Mv 1 Lu cell lysate: sc-3810 or PC-3 cell lysate: sc-2220.

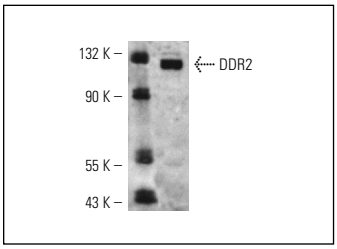
STORAGE

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.

DATA



DDR2 (N-20): sc-7555. Western blot analysis of DDR2 expression in PC-3 whole cell lysate.

SELECT PRODUCT CITATIONS

1. Ferri, N., et al. 2004. Role of discoidin domain receptors 1 and 2 in human smooth muscle cell-mediated collagen remodeling. Am. J. Pathol. 164: 1575-1585.
2. Chen, S.C., et al. 2008. Hypoxia induces discoidin domain receptor 2 expression via the p38 pathway in vascular smooth muscle cells to increase their migration. Biochem. Biophys. Res. Commun. 374: 662-667.
3. Baudino, T.A., et al. 2008. Cell patterning: interaction of cardiac myocytes and fibroblasts in three-dimensional culture. Microsc. Microanal. 14: 117-125.
4. Shyu, K.G., et al. 2009. Hyperbaric oxygen activates discoidin domain receptor 2 via tumour necrosis factor-α and the p38 MAPK pathway to increase vascular smooth muscle cell migration through matrix metalloproteinase 2. Clin. Sci. 116: 575-583.
5. Sun, J., et al. 2009. Improvement in cardiac function after bone marrow cell thearpy is associated with an increase in myocardial inflammation. Am. J. Physiol. Heart Circ. Physiol. 296: H43-H50.
6. Jones, J.A., et al. 2009. Alterations in aortic cellular constituents during thoracic aortic aneurysm development: myofibroblast-mediated vascular remodeling. Am. J. Pathol. 175: 1746-1756.
7. Li, L., et al. 2010. Src tyrosine kinase regulates angiotensin II-induced protein kinase Cζ activation and proliferation in vascular smooth muscle cells. Peptides 31: 1159-1164.
8. Jones, J.A., et al. 2010. Alterations in membrane type-1 matrix metalloproteinase abundance after the induction of thoracic aortic aneurysm in a murine model. Am. J. Physiol. Heart Circ. Physiol. 299: H114-H124.
9. Zhang, X.H., et al. 2010. Expression of discoidin domain receptors (DDR2) in alcoholic liver fibrosis in rats. Arch. Med. Res. 41: 586-592.