SANTA CRUZ BIOTECHNOLOGY, INC.

DDR1 (N-13): sc-7553

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, 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 (N-13) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of DDR1 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-7553 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

DDR1 (N-13) 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

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.

Positive Controls: mouse placenta extract: sc-364248, ZR-75-1 cell lysate: sc-2241 rat brain extract: sc-2392.

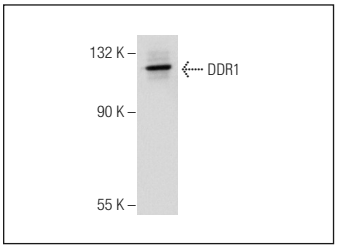
STORAGE

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



DDR1 (N-13): sc-7553. Western blot analysis of DDR1 expression in mouse placenta tissue extract.

SELECT PRODUCT CITATIONS

1. Lee, R., et al. 2004. Localization of discoidin domain receptors in rat kidney. Nephron Exp. Nephrol. 97: e62-e70.
2. Xu, L., et al. 2005. Activation of the discoidin domain receptor 2 induces expression of matrix metalloproteinase-13 associated with osteoarthritis in mice. J. Biol. Chem. 280: 548-555.
3. Meyer zum Gottesberge, A.M., et al. 2008. Inner ear defects and hearing loss in mice lacking the collagen receptor DDR1. Lab. Invest. 88: 27-37.
4. Shyu, K.G., et al. 2008. RNA interference for discoidin domain receptor 2 attenuates neointimal formation in balloon injured rat carotid artery. Arterioscler. Thromb. Vasc. Biol. 28: 1447-1453.
5. 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.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.