SANTA CRUZ BIOTECHNOLOGY, INC.

DDR1 (H-126): sc-8988

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 6p21.3; Ddr1 (mouse) mapping to 17 C.

SOURCE

DDR1 (H-126) is a rabbit polyclonal antibody raised against amino acids 291-416 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.

APPLICATIONS

DDR1 (H-126) 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).

DDR1 (H-126) is also recommended for detection of DDR1 in additional species, including 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.

Positive Controls: SK-BR-3 cell lysate: sc-2218, ZR-75-1 cell lysate: sc-2241 or A-431 whole cell lysate: sc-2201.

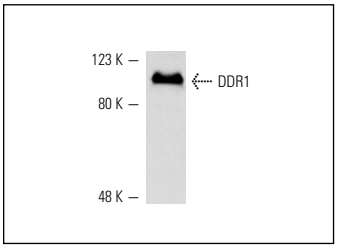
STORAGE

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 (H-126): sc-8988. Western blot analysis of non-glycosylated DDR1 mature chain expression in rat brain tissue.

SELECT PRODUCT CITATIONS

1. Dejmek, J., et al. 2003. Wnt-5a and G protein-signaling are required for collagen-induced DDR1 receptor activation and normal mammary cell adhesion. Int. J. Cancer 103: 344-351.
2. Li, H., et al. 2005. Signaling mechanisms responsible for lysophosphatidic acid-induced urokinase plasminogen activator expression in ovarian cancer cells. J. Biol. Chem. 280: 10564-10571.
3. Hieronymus, H., et al. 2006. Gene expression signature-based chemical genomic prediction identifies a novel class of HSP 90 pathway modulators. Cancer Cell 10: 321-330.
4. Lee, K.W., et al. 2009. Behavioral stress accelerates plaque pathogenesis in the brain of Tg2576 mice via generation of metabolic oxidative stress. J. Neurochem. 108: 165-175.
5. Castro-Sanchez, L., et al. 2010. Native type IV collagen induces cell migration through a CD9 and DDR1-dependent pathway in MDA-MB-231 breast cancer cells. Eur. J. Cell Biol. 89: 843-852.

PROTOCOLS

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