SANTA CRUZ BIOTECHNOLOGY, INC.

DDR1 (48B3): sc-21790

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.

SOURCE

DDR1 (48B3) is a mouse monoclonal antibody raised against DDR1 of human origin.

PRODUCT

Each vial contains 200 µg IgM kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

DDR1 (48B3) is available conjugated to agarose (sc-21790 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; and to either phycoerythrin (sc-21790 PE) or fluorescein (sc-21790 FITC), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM.

APPLICATIONS

DDR1 (48B3) is recommended for detection of DDR1 of human origin by 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 flow cytometry (1 µg per 1 x 10^6 cells).

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

Molecular Weight of DDR1: 125 kDa.

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

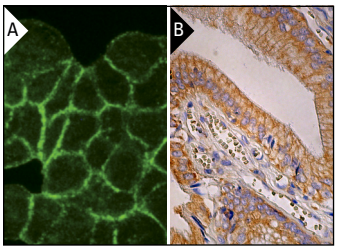
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850. 2) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

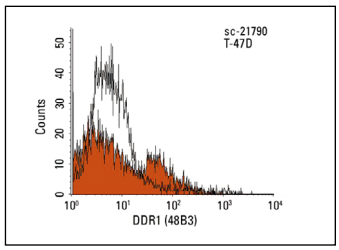
STORAGE

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

DATA



DDR1 (48B3): sc-21790. Immunofluorescence staining of methanol-fixed T-47D cells showing membrane localization (**A**). Immunoperoxidase staining of formalin fixed, paraffin-embedded human gall bladder tissue showing cytoplasmic staining of glandular cells (**B**).



DDR1 (48B3): sc-21790. Indirect FCM analysis of T-47D cells stained with DDR1 (48B3), followed by PE-conjugated goat anti-mouse IgM-PE: sc-3768. Black line histogram represents the isotype control, normal mouse IgM: sc-3881.

SELECT PRODUCT CITATIONS

1. Matsuyama, W., et al. 2005. Activation of discoidin domain receptor 1 on CD14-positive bronchoalveolar lavage fluid cells induces chemokine production in idiopathic pulmonary fibrosis. J. Immunol. 174: 6490-6498.
2. Matsuyama, W., et al. 2005. Involvement of discoidin domain receptor 1 in the deterioration of pulmonary sarcoidosis. Am. J. Respir. Cell Mol. Biol. 33: 565-373.
3. Ram, R., et al. 2006. Discoidin domain receptor-1a (DDR1a) promotes glioma cell invasion and adhesion in association with matrix metalloproteinase-2. J. Neurooncol. 76: 239-248.
4. Matsuyama, W., et al. 2007. Discoidin domain receptor 1 contributes to eosinophil survival in an NFκB-dependent manner in Churg-Strauss syndrome. Blood 109: 22-30.
5. Bianchetti, L., et al. 2012. Extracellular matrix remodelling properties of human fibrocytes. J. Cell. Mol. Med. 16: 483-495.
6. Celegato, M., et al. 2015. Preclinical activity of the repurposed drug auranofin in classical Hodgkin lymphoma. Blood 126: 1394-1397.

RESEARCH USE

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

PROTOCOLS

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

CONJUGATES

See **DDR1 (C-6): sc-374618** for DDR1 antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor® 488, 546, 594, 647, 680 and 790.