SANTA CRUZ BIOTECHNOLOGY, INC.

# Mad 1 (FL-221): sc-766

SANTA CRUZ BIOTECHNOLOGY

*The Power to Question*

## BACKGROUND

It is now well established that the nature and relative abundance of individual subunits of different classes of transcription factors can positively or negatively regulate levels of gene expression. Myc proteins homodimerize and bind DNA poorly, if at all, at physiological levels. Max is a nuclear localized bHLH-Zip protein initially identified by screening a B cell expression library with the bHLH-Zip region of c-Myc. Max homodimers and the Myc-Max heterodimers bind the sequence CACGTG; however the binding of the heterodimeric complex is stronger than the Max homodimer. The Max gene products have been identified as (Max) and (Max 9) proteins that differ by a 9 amino acid insertion N-terminal to the basic region. In contrast to Myc, which is highly regulated during progression through the cell cycle, Max is highly stable and is much more abundant than Myc. Two members of the bHLH-Zip protein family, designated Mad and Mxi 1 homodimerize poorly but form heterodimeric complexes with Max that have opposing functions to Myc-Max heterodimers with respect to regulation of gene expression.

## CHROMOSOMAL LOCATION

Genetic locus: MXD1 (human) mapping to 2p13.3; Mad (mouse) mapping to 6 D1.

## SOURCE

Mad 1 (FL-221) is a rabbit polyclonal antibody raised against against amino acids 1-221 representing full length Mad 1 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.

Also available as TransCruz reagent for Gel Supershift and ChIP applications, sc-766 X, 200 µg/0.1 ml.

## APPLICATIONS

Mad 1 (FL-221) is recommended for detection of Mad 1 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). Mad 1 (FL-221) is also recommended for detection of Mad 1 in additional species, including equine, bovine and porcine.

Suitable for use as control antibody for Mad 1 siRNA (h): sc-38073, Mad 1 siRNA (m): sc-38074, Mad 1 shRNA Plasmid (h): sc-38073-SH, Mad 1 shRNA Plasmid (m): sc-38074-SH, Mad 1 shRNA (h) Lentiviral Particles: sc-38073-V and Mad 1 shRNA (m) Lentiviral Particles: sc-38074-V.

Mad 1 (FL-221) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight (predicted) of Mad 1: 25 kDa.

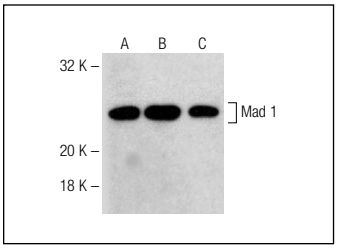
Molecular Weight (observed) of Mad 1: 32-35 kDa.

Positive Controls: MCF7 whole cell lysate: sc-2206, HeLa whole cell lysate: sc-2200 or A-431 nuclear extract: sc-2122.

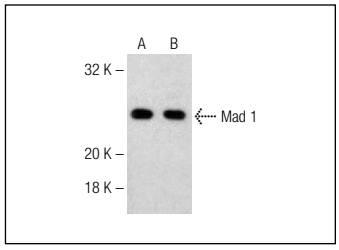
## STORAGE

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

## DATA




Mad 1 (FL-221): sc-766. Western blot analysis of Mad 1 expression in A-431 (**A**), C32 (**B**) and HT-1080 (**C**) whole cell lysates.




Mad 1 (FL-221): sc-766. Western blot analysis of Mad 1 expression in HeLa (**A**) and MCF7 (**B**) whole cell lysates.

## SELECT PRODUCT CITATIONS


1. Cultraro, C.M., et al. 1997. Function of the c-Myc antagonist Mad 1 during a molecular switch from proliferation to differentiation. Mol. Cell. Biol. 17: 2353-2359.
2. Fan, S., et al. 1998. Scatter factor protects epithelial and carcinoma cells against apoptosis induced by DNA-damagin agents. Oncogene 17: 131-141.
3. Barrera-Hernandez, G., et al. 2000. Mad 1 function is regulated through elements within the carboxy terminus. Mol. Cell. Biol. 20: 4253-4264.
4. Xiao, X., et al. 2003. Role of Ets/Id proteins for telomerase regulation in human cancer cells. Exp. Mol. Pathol. 75: 238-247.
5. Casillas, M.A., et al. 2003. Induction of endogenous telomerase (hTERT) by c-Myc in WI-38 fibroblasts transformed with specific genetic elements. Gene 316: 57-65.
6. Park, S.W., et al. 2005. Retinoic acid-induced chromatin remodeling of mouse κ opioid receptor gene. J. Neurosci. 25: 3350-3357.


## RESEARCH USE

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

## PROTOCOLS

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