SANTA CRUZ BIOTECHNOLOGY, INC.

Max (C-124): sc-765

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 Mxi1, 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: MAX (human) mapping to 14q23.3; Max (mouse) mapping to 12 C3.

SOURCE

Max (C-124) is a rabbit polyclonal antibody raised against amino acids 28-151 of Max 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-765 X, 200 µg/0.1 ml.

Max (C-124) is available conjugated to HRP (sc-765 HRP), 200 µg/ml, for WB, IHC(P) and ELISA.

APPLICATIONS

Max (C-124) is recommended for detection of Max p21 and p22 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Max (C-124) is also recommended for detection of Max p21 and p22 in additional species, including equine and canine.

Suitable for use as control antibody for Max siRNA (h): sc-38079, Max siRNA (m): sc-38080, Max shRNA Plasmid (h): sc-38079-SH, Max shRNA Plasmid (m): sc-38080-SH, Max shRNA (h) Lentiviral Particles: sc-38079-V and Max shRNA (m) Lentiviral Particles: sc-38080-V.

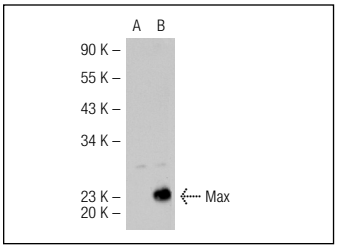
Max (C-124) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of Max: 26 kDa.

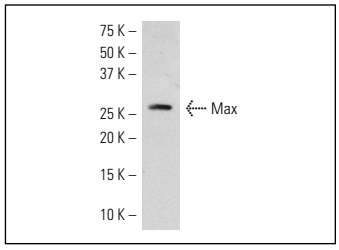
STORAGE

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

DATA



Max (C-124): sc-765. Western blot analysis of Max expression in non-transfected: sc-117752 (**A**) and human Max transfected: sc-114184 (**B**) 293T whole cell lysates.



Max (C-124): sc-765. Western blot analysis of Max expression in HeLa nuclear extract.

SELECT PRODUCT CITATIONS

1. Boyd, K.E., et al. 1997. Myc versus USF: discrimination at the cad gene is determined by core promotor elements. Mol. Cell. Biol. 17: 2529-2537.
2. Meroni, G., et al. 1997. Rox, a novel bHLHZip protein expressed in quiescent cells that heterodimerizes with Max, binds a non-canonical E box and acts as a transcriptional repressor. EMBO J. 16: 2892-2906.
3. Font, M.P., et al. 2004. Repression of transcription at the human T-cell receptor Vbeta2.2 segment is mediated by a MAX/MAD/mSin3 complex acting as a scaffold for HDAC activity. Biochem. Biophys. Res. Commun. 325: 1021-1029.
4. Matsuoka, Y., et al. 2008. Induction of a novel histone deacetylase 1/c-Myc/Mnt/Max complex formation is implicated in parity-induced refractoriness to mammary carcinogenesis. Cancer Sci. 99: 309-315.
5. Jiang, H., et al. 2009. Stabilizers of the Max homodimer identified in virtual ligand screening inhibit Myc function. Mol. Pharmacol. 76: 491-502.
6. Guo, J., et al. 2009. Efficacy, pharmacokinetics, tisssue distribution, and metabolism of the Myc-Max disruptor, 10058-F4 [Z,E]-5-[4-ethylbenzylidine]-2-thioxothiazolidin-4-one, in mice. Cancer Chemother. Pharmacol. 63: 615-625.
7. Zhang, P., et al. 2010. c-Myc is required for the CHREBP-dependent activation of glucose-responsive genes. Mol. Endocrinol. 24: 1274-1286.

RESEARCH USE

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