



## MondoA (G-12): sc-133396

### BACKGROUND

MondoA, also known as MLXIP (MLX interacting protein), KIAA0867 or MIR, is a 919 amino acid protein that localizes to the nucleus and the cytoplasm, as well as to the outer mitochondrial membrane, and contains one bHLH domain. Expressed in a variety of tissues with highest expression in skeletal muscle, MondoA functions as a dimeric structure that binds DNA at the canonical E box sequence 5'-CACGTG-3' and is involved in transcriptional activation and glucose-responsive gene regulation. Multiple isoforms of MondoA exist due to alternative splicing events. The gene encoding MondoA maps to human chromosome 12, which encodes over 1,100 genes and comprises approximately 4.5% of the human genome. Chromosome 12 is associated with a variety of diseases and afflictions, including hypochondrogenesis, achondrogenesis, Kniest dysplasia, Noonan syndrome and trisomy 12p, which causes facial developmental defects and seizure disorders.

### REFERENCES

1. Nagase, T., et al. 1998. Prediction of the coding sequences of unidentified human genes. XII. The complete sequences of 100 new cDNA clones from brain which code for large proteins *in vitro*. DNA Res. 5: 355-364.
2. Billin, A.N., et al. 2000. MondoA, a novel basic helix-loop-helix-leucine zipper transcriptional activator that constitutes a positive branch of a max-like network. Mol. Cell. Biol. 20: 8845-8854.
3. Eilers, A.L., et al. 2002. A novel heterodimerization domain, CRM1, and 14-3-3 control subcellular localization of the MondoA-Mlx heterocomplex. Mol. Cell. Biol. 22: 8514-8526.
4. Bornhauser, B.C., et al. 2003. MSAP is a novel MIR-interacting protein that enhances neurite outgrowth and increases myosin regulatory light chain. J. Biol. Chem. 278: 35412-35420.
5. Sans, C.L., et al. 2006. MondoA-Mlx heterodimers are candidate sensors of cellular energy status: mitochondrial localization and direct regulation of glycolysis. Mol. Cell. Biol. 26: 4863-4871.

### CHROMOSOMAL LOCATION

Genetic locus: MLXIP (human) mapping to 12q24.31.

### SOURCE

MondoA (G-12) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping within an internal region of MondoA of human origin.

### PRODUCT

Each vial contains 100 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-133396 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

Available as TransCruz reagent for Gel Supershift and ChIP applications, sc-133396 X, 200 µg/0.1 ml.

### RESEARCH USE

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

### APPLICATIONS

MondoA (G-12) is recommended for detection of MondoA isoforms 1-5 of human origin by Western Blotting (starting dilution 1:100, dilution range 1:50-1:500), immunofluorescence (starting dilution 1:25, dilution range 1:25-1:250) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for MondoA siRNA (h): sc-95771, MondoA shRNA Plasmid (h): sc-95771-SH and MondoA shRNA (h) Lenti-viral Particles: sc-95771-V.

MondoA (G-12) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of MondoA: 101 kDa.

### RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

### STORAGE

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

### PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.