

# ITF-2 (N-18): sc-48950

## BACKGROUND

Immunoglobulin transcription factor 2 (ITF-2), also designated transcription factor and SL3-3 enhancer factor 2 (SEF-2) is a basic helix-turn-helix transcription factor. ITF-2 binds to the immunoglobulin enhancer Mu-E5/KE5-motif and to the Ephrussi-box (E-box) element present in SSTR2-1NR and serves as an activator of transcription in muscle-specific genes. ITF-2 preferentially binds to either 5'-ACANNTGT-3' or 5'-CCANNTGG-3'. ITF-2 belongs to the class of simple bHLH transcription factors identified as ubiquitous E-box binding factors, which also includes the E2A gene products (E12 and E47) and HEB. The protein is expressed in adult heart, brain, placenta, skeletal muscle and embryonic brain. ITF-2 forms homo- or hetero-oligomers with myogenin and MyoD; alternatively spliced isoforms of ITF-2 function to activate or repress their transcription.

## REFERENCES

- Henthorn, P., et al. 1990. Sequence of the cDNA encoding ITF-2, a positive-acting transcription factor. *Nucleic Acids Res.* 18: 678.
- Henthorn, P., et al. 1990. Two distinct transcription factors that bind the immunoglobulin enhancer microE5/ $\kappa$  2 motif. *Science* 247: 467-470.
- French, B.A., et al. 1991. Heterodimers of myogenic helix-loop-helix regulatory factors and E12 bind a complex element governing myogenic induction of the avian cardiac  $\alpha$ -Actin promoter. *Mol. Cell. Biol.* 11: 2439-2450.
- Corneliussen, B., et al. 1991. Helix-loop-helix transcriptional activators bind to a sequence in glucocorticoid response elements of retrovirus enhancers. *J. Virol.* 65: 6084-6093.
- Skerjanc, I.S., et al. 1996. A splice variant of the ITF-2 transcript encodes a transcription factor that inhibits MyoD activity. *J. Biol. Chem.* 271: 3555-3561.

## CHROMOSOMAL LOCATION

Genetic locus: TCF4 (human) mapping to 18q21.2; Tcf4 (mouse) mapping to 18 E2.

## SOURCE

ITF-2 (N-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of ITF-2 of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g 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-48950 X, 200  $\mu$ g/0.1 ml.

Blocking peptide available for competition studies, sc-48950 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## STORAGE

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

## APPLICATIONS

ITF-2 (N-18) is recommended for detection of ITF-2 isoforms SEF2-1A and SEF2-1D of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g 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).

ITF-2 (N-18) is also recommended for detection of ITF-2 isoforms SEF2-1A and SEF2-1D in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for ITF-2 siRNA (h): sc-61657, ITF-2 siRNA (m): sc-61658, ITF-2 shRNA Plasmid (h): sc-61657-SH, ITF-2 shRNA Plasmid (m): sc-61658-SH, ITF-2 shRNA (h) Lentiviral Particles: sc-61657-V and ITF-2 shRNA (m) Lentiviral Particles: sc-61658-V.

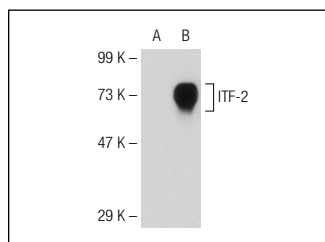
ITF-2 (N-18) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight (predicted) of ITF-2: 71 kDa.

Molecular Weight (observed) of ITF-2: 85 kDa.

Positive Controls: ITF-2 (m): 293T Lysate: sc-121127, A549 cell lysate: sc-2413 or human placenta extract: sc-363772.

## DATA



ITF-2 (N-18): sc-48950. Western blot analysis of ITF-2 expression in non-transfected: sc-117752 (A) and mouse ITF-2 transfected: sc-121127 (B) 293T whole cell lysates.

## RESEARCH USE

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

## PROTOCOLS

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

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Try **ITF-2 (C-8): sc-393407** or **ITF-2 (C-1): sc-393255**, our highly recommended monoclonal alternatives to ITF-2 (N-18).