

ALY (Q-15): sc-30816

BACKGROUND

ALY (also designated THO complex subunit 4, THOC4, REF1, Refbp1 and BEF) is the mammalian homolog of the yeast mRNA export factor Yralp. A transcriptional coactivator, ALY belongs to the cytidylyltransferase family and is important in mRNA processing and export. During spliceosome assembly, it is recruited to messenger ribonucleoprotein (mRNP) complexes and becomes tightly associated with the spliced mRNP. Consistent with splicing-dependent recruitment, ALY co-localizes with splicing factors in the nucleus. It promotes transcriptional activation by promoting the dimerization of transcription factors containing basic leucine zipper domains. Although ubiquitously expressed, ALY specifically associates with the activation domains of LEF-1 and AML-1, both of which are protein components of the TCR α enhancer complex. Research indicates that ALY may mediate context-dependent transcriptional activation by facilitating the functional collaboration of multiple proteins in the TCR α enhancer complex.

REFERENCES

1. Bruhn, L., et al. 1997. ALY, a context-dependent coactivator of LEF-1 and AML-1, is required for TCR α enhancer function. *Genes Dev.* 11: 640-653.
2. Virbasius, C.M., et al. 1999. A human nuclear-localized chaperone that regulates dimerization, DNA binding, and transcriptional activity of bZIP proteins. *Mol. Cell* 4: 219-228.
3. Strasser, K., et al. 2000. Yra1p, a conserved nuclear RNA-binding protein, interacts directly with Mex67p and is required for mRNA export. *EMBO J.* 19: 410-420.
4. Stutz, F., et al. 2000. REF, an evolutionary conserved family of hnRNP-like proteins, interacts with TAP/Mex67p and participates in mRNA nuclear export. *RNA* 6: 638-650.
5. Zhou, Z., et al. 2000. The protein ALY links pre-messenger-RNA splicing to nuclear export in metazoans. *Nature* 407: 401-405.
6. Luo, M.L., et al. 2001. Pre-mRNA splicing and mRNA export linked by direct interactions between UAP56 and ALY. *Nature* 413: 644-647.
7. Gatfield, D., et al. 2002. REF1/ALY and the additional exon junction complex proteins are dispensable for nuclear mRNA export. *J. Cell Biol.* 159: 579-588.

CHROMOSOMAL LOCATION

Genetic locus: ALYREF (human) mapping to 17q25.3; Alyref (mouse) mapping to 11 E2.

SOURCE

ALY (Q-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of ALY of human origin.

PRODUCT

Each vial contains 200 μ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-30816 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

ALY (Q-15) is recommended for detection of ALY of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ 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).

Suitable for use as control antibody for ALY siRNA (h): sc-45390, ALY siRNA (m): sc-38248, ALY shRNA Plasmid (h): sc-45390-SH, ALY shRNA Plasmid (m): sc-38248-SH, ALY shRNA (h) Lentiviral Particles: sc-45390-V and ALY shRNA (m) Lentiviral Particles: sc-38248-V.

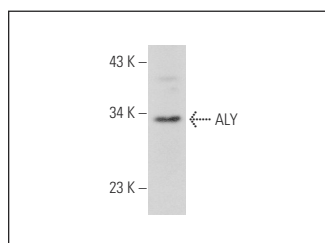
Molecular Weight of ALY: 32 kDa.

Positive Controls: Jurkat nuclear extract: sc-2132 or ALY (h2): 293T Lysate: sc-176824.

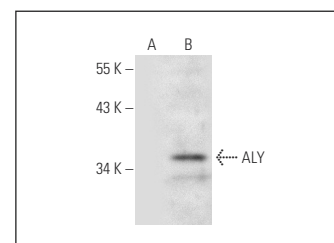
RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



ALY (Q-15): sc-30816. Western blot analysis of ALY expression in Jurkat nuclear extract.



ALY (Q-15): sc-30816. Western blot analysis of ALY expression in non-transfected: sc-117752 (A) and human ALY transfected: sc-176824 (B) 293T whole cell lysates.

STORAGE

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

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.