

# ALY (L-15): sc-13719

## BACKGROUND

ALY (also designated THO complex subunit 4, THOC4, REF1, Refbp1 and BEF) is the mammalian homolog of the yeast mRNA export factor Yra1p. A transcriptional coactivator, ALY belongs to the cytidyltransferase 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  $\alpha$  enhancer complex. Research indicates that ALY may mediate context-dependent transcriptional activation by facilitating the functional collaboration of multiple proteins in the TCR  $\alpha$  enhancer complex.

## REFERENCES

1. Bruhn, L., et al. 1997. ALY, a context-dependent coactivator of LEF-1 and AML-1, is required for TCR  $\alpha$  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: THOC4 (human) mapping to 17q25.3; Thoc4 (mouse) mapping to 11 E2.

## SOURCE

ALY (L-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of ALY of mouse origin.

## PRODUCT

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

Blocking peptide available for competition studies, sc-13719 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

ALY (L-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  $\mu$ 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), 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).

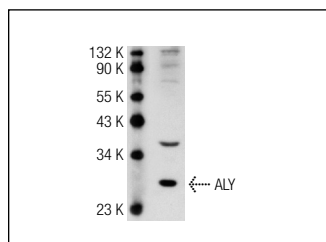
ALY (L-15) is also recommended for detection of ALY in additional species, including bovine.

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.

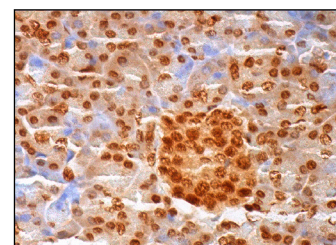
Molecular Weight of ALY: 32 kDa.

Positive Controls: HeLa nuclear extract: sc-2120.

## DATA



ALY (L-15): sc-13719. Western blot analysis of ALY expression in HeLa nuclear extract.



ALY (L-15): sc-13719. Immunoperoxidase staining of formalin fixed, paraffin-embedded human pancreas tissue showing nuclear and cytoplasmic staining of exocrine glandular cells and islets of Langerhans.

## 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](http://www.scbt.com) or our catalog for detailed protocols and support products.

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Try **ALY (11G5): sc-32311**, our highly recommended monoclonal alternative to ALY (L-15).