

ALR (C-3): sc-365886

BACKGROUND

ALR (augmenter of liver regeneration), also called Erv1-like growth factor, hepatopoietin (HPO) or hepatic regenerative stimulation substance (HSS), is a hepatotrophic growth factor and flavin-linked sulfhydryl oxidase expressed in various tissues. ALR exists as a homodimer and belongs to the Erv1/ALR family of proteins. This family can be found in higher and lower eukaryotes. ALR has two forms: a cytosolic form and a nuclear form. The nuclear form regulates the transcriptional activity of AP-1. The cytosolic form plays a role in the biogenesis of Fe/S proteins and contributes to cellular iron homeostasis. In addition, ALR induces the expression of S-adenosylmethionine decarboxylase and ornithine decarboxylase (ODC), which each play an important role in the synthesis of polyamines. Through stimulation of polyamine synthesis, ALR heavily contributes to the regulation of the different stages of liver regeneration.

REFERENCES

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- Li, Q., et al. 2005. Effects of augmentation of liver regeneration recombinant plasmid on rat hepatic fibrosis. *World J. Gastroenterol.* 11: 2438-2443.
- Zhang, L.M., et al. 2005. Effect of naked eukaryotic expression plasmid encoding rat augmenter of liver regeneration on acute hepatic injury and hepatic failure in rats. *World J. Gastroenterol.* 11: 3680-3685.
- Tury, A., et al. 2005. Expression of the sulfhydryl oxidase ALR (augmenter of liver regeneration) in adult rat brain. *Brain Res.* 1048: 87-97.
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- Kay, C.W., et al. 2006. Determination of the distance between the two neutral flavin radicals in augmenter of liver regeneration by pulsed ELDOR. *J. Am. Chem. Soc.* 128: 76-77.

CHROMOSOMAL LOCATION

Genetic locus: GFER (human) mapping to 16p13.3; Gfer (mouse) mapping to 17 A3.3.

SOURCE

ALR (C-3) is a mouse monoclonal antibody raised against amino acids 1-205 representing full length ALR of human origin.

PRODUCT

Each vial contains 200 µg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

RESEARCH USE

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

APPLICATIONS

ALR (C-3) is recommended for detection of ALR of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for ALR siRNA (h): sc-72224, ALR siRNA (m): sc-72225, ALR shRNA Plasmid (h): sc-72224-SH, ALR shRNA Plasmid (m): sc-72225-SH, ALR shRNA (h) Lentiviral Particles: sc-72224-V and ALR shRNA (m) Lentiviral Particles: sc-72225-V.

Molecular Weight of ALR nuclear isoform: 15 kDa.

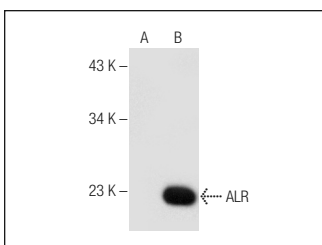
Molecular Weight of ALR cytoplasmic isoform: 23 kDa.

Positive Controls: ALR (m): 293T Lysate: sc-118366, Hep G2 cell lysate: sc-2227 or mouse liver extract: sc-2256.

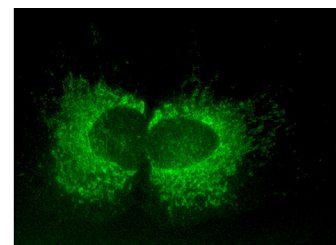
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 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 m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



ALR (C-3): sc-365886. Western blot analysis of ALR expression in non-transfected: sc-117752 (A) and mouse ALR transfected: sc-118366 (B) 293T whole cell lysates.



ALR (C-3): sc-365886. Immunofluorescence staining of formalin-fixed Hep G2 cells showing mitochondria localization.

SELECT PRODUCT CITATIONS

- Xiao, F., et al. 2017. Hepatic stimulator substance inhibits calcium over-flow through the mitochondria-associated membrane compartment during nonalcoholic steatohepatitis. *Lab. Invest.* 97: 289-301.

STORAGE

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