

ALR (E-7): sc-365885

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.

CHROMOSOMAL LOCATION

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

SOURCE

ALR (E-7) is a mouse monoclonal antibody raised against amino acids 1-205 representing full length ALR of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2b} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

ALR (E-7) is available conjugated to agarose (sc-365885 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-365885 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-365885 PE), fluorescein (sc-365885 FITC), Alexa Fluor® 488 (sc-365885 AF488), Alexa Fluor® 546 (sc-365885 AF546), Alexa Fluor® 594 (sc-365885 AF594) or Alexa Fluor® 647 (sc-365885 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-365885 AF680) or Alexa Fluor® 790 (sc-365885 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

ALR (E-7) 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.

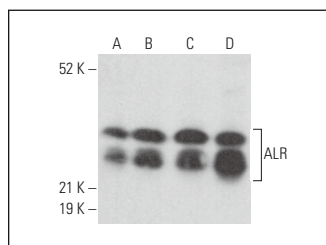
Molecular Weight of ALR cytoplasmic isoform: 23 kDa.

Positive Controls: Hep G2 cell lysate: sc-2227, ALR (m): 293T Lysate: sc-118366 or Jurkat whole cell lysate: sc-2204.

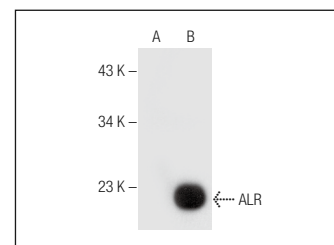
RECOMMENDED SUPPORT REAGENTS

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 (E-7): sc-365885. Western blot analysis of ALR expression in Hep G2 (A), Jurkat (B), K-562 (C) and IB4 (D) whole cell lysates.



ALR (E-7): sc-365885. Western blot analysis of ALR expression in non-transfected: sc-117752 (A) and mouse ALR transfected: sc-118366 (B) 293T whole cell lysates.

SELECT PRODUCT CITATIONS

1. Zeng, H.Q., et al. 2017. Silencing of augmenter of liver regeneration inhibited cell proliferation and triggered apoptosis in U266 human multiple myeloma cells. *Braz. J. Med. Biol. Res.* 50: e6139.
2. Duan, L., et al. 2020. Late protective effect of netrin-1 in the murine acetaminophen hepatotoxicity model. *Toxicol. Sci.* 175: 168-181.
3. Feng, S., et al. 2023. TMPRSS11D/ALR-mediated ER stress regulates the function of myeloid-derived suppressor cells in the cervical cancer micro-environment. *Int. Immunopharmacol.* 124: 110869.
4. Subramanian, K., et al. 2023. HERV1-env induces unfolded protein response activation in autoimmune liver disease: a potential mechanism for regulatory T cell dysfunction. *J. Immunol.* 210: 732-744.

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 for detailed protocols and support products.

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