

# LGP2 (H-159): sc-134667

## BACKGROUND

Helicases are enzymes that catalyze the separation of double stranded DNA or RNA by utilizing ATP. LGP2, also known as probable ATP-dependent RNA helicase DHX58, is a 678 amino acid protein belonging to the helicase family. LGP2 acts as a negative regulator of host innate immune defense against viruses by binding dsRNA produced during viral replication. The repressor domain of LGP2 binds to RIG-I, a signaling protein involved in host defenses against hepatitis C virus (HCV). By preventing RIG-I multimerization, LGP2 negatively regulates RIG-I-mediated signaling. Localized to the cytoplasm, LGP2 contains one helicase ATP-binding domain and one helicase C-terminal domain.

## REFERENCES

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2. Komuro, A. and Horvath, C.M. 2006. RNA- and virus-independent inhibition of antiviral signaling by RNA helicase LGP2. *J. Virol.* 80: 12332-12342.
3. Saito, T., Hirai, R., Loo, Y.M., Owen, D., Johnson, C.L., Sinha, S.C., Akira, S., Fujita, T. and Gale, M. 2007. Regulation of innate antiviral defenses through a shared repressor domain in RIG-I and LGP2. *Proc. Natl. Acad. Sci. USA* 104: 582-587.
4. Murali, A., Li, X., Ranjith-Kumar, C.T., Bhardwaj, K., Holzenburg, A., Li, P. and Kao, C.C. 2008. Structure and function of LGP2, a DEX(D/H) helicase that regulates the innate immunity response. *J. Biol. Chem.* 283: 15825-15833.
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## CHROMOSOMAL LOCATION

Genetic locus: DHX58 (human) mapping to 17q21.2; Dhx58 (mouse) mapping to 11 D.

## SOURCE

LGP2 (H-159) is a rabbit polyclonal antibody raised against amino acids 520-678 mapping at the C-terminus of LGP2 of human origin.

## PRODUCT

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

## STORAGE

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

## APPLICATIONS

LGP2 (H-159) is recommended for detection of LGP2 of human and, to a lesser extent, mouse and rat origin by Western Blotting (starting dilution 1:200, 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 LGP2 siRNA (h): sc-93967, LGP2 siRNA (m): sc-146718, LGP2 shRNA Plasmid (h): sc-93967-SH, LGP2 shRNA Plasmid (m): sc-146718-SH, LGP2 shRNA (h) Lentiviral Particles: sc-93967-V and LGP2 shRNA (m) Lentiviral Particles: sc-146718-V.

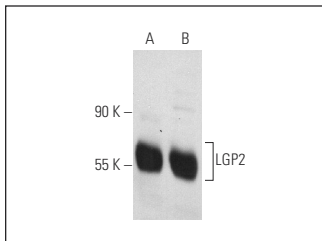
Molecular Weight of LGP2: 76 kDa.

Positive Controls: human LGP2 transfected HEK293T whole cell lysate.

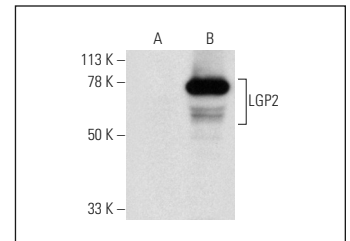
## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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 goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

## DATA



LGP2 (H-159): sc-134667. Western blot analysis of LGP2 expression in mouse liver (A) and mouse thymus (B) tissue extracts.



LGP2 (H-159): sc-134667. Western blot analysis of LGP2 expression in non-transfected (A) and human LGP2 transfected (B) HEK293T whole cell lysates.

## RESEARCH USE

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

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Try **LGP2 (C-9): sc-373827** or **LGP2 (E-1): sc-373826**, our highly recommended monoclonal alternatives to LGP2 (H-159).