

LGP2 (M-159): sc-134668

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

1. Yoneyama, M., Kikuchi, M., Matsumoto, K., Imaizumi, T., Miyagishi, M., Taira, K., Foy, E., Loo, Y.M., Gale, M., Akira, S., Yonehara, S., Kato, A. and Fujita, T. 2005. Shared and unique functions of the DExD/H-box helicases RIG-I, MDA5, and LGP2 in antiviral innate immunity. *J. Immunol.* 175: 2851-2858.
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.
5. Online Mendelian Inheritance in Man, OMIM™. 2008. Johns Hopkins University, Baltimore, MD. MIM Number: 608588. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>

CHROMOSOMAL LOCATION

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

SOURCE

LGP2 (M-159) is a rabbit polyclonal antibody raised against amino acids 520-678 mapping at the C-terminus of LGP2 of mouse 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 (M-159) is recommended for detection of LGP2 of mouse, rat and, to a lesser extent, human 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.

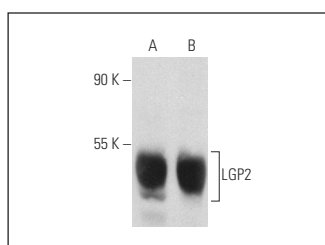
Molecular Weight of LGP2: 76 kDa.

Positive Controls: mouse liver extract: sc-2256 or mouse thymus extract: sc-2406.

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 (M-159): sc-134668. Western blot analysis of LGP2 expression in mouse liver (A) and mouse thymus (B) tissue extracts.

RESEARCH USE

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

MONOS
Satisfaction
Guaranteed

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