

## LGP2 Protein, Human (HEK293, FLAG)

<b>Cat. No.:</b>	HY-P701998
<b>Synonyms:</b>	CGAS; Probable ATP-dependent RNA helicase DHX58; Probable ATP-dependent helicase LGP2; Protein D11Lgp2 homolog; RIG-I-like receptor 3; RLR-3; RIG-I-like receptor LGP2; RLR
<b>Species:</b>	Human
<b>Source:</b>	HEK293
<b>Accession:</b>	Q96C10 (M1-D678)
<b>Gene ID:</b>	79132
<b>Molecular Weight:</b>	

### PROPERTIES

<b>Appearance</b>	Solution.
<b>Formulation</b>	Supplied as a 0.22 µm filtered solution of 50 mM Tris-HCl, pH7.5, 200 mM NaCl, 20% glycerol.
<b>Endotoxin Level</b>	<1 EU/µg, determined by LAL method.
<b>Reconstitution</b>	Please use rapid thawing with running water to thaw the protein.
<b>Storage &amp; Stability</b>	Stored at -80°C for 1 year. It is stable at -20°C for 3 months after opening. It is recommended to freeze aliquots at -80°C for extended storage. Avoid repeated freeze-thaw cycles.
<b>Shipping</b>	Shipping with dry ice.

### DESCRIPTION

<b>Background</b>	<p>LGP2 Protein functions as a key regulator of RIGI and IFIH1/MDA5-mediated antiviral signaling, contributing both negative and positive regulatory functions that are contingent on various factors such as the infecting virus, target cells, or a combination of both. Lacking the CARD domain necessary for activating MAVS/IPS1-dependent signaling events, LGP2 cannot initiate antiviral signaling on its own. Its inhibitory effects on RIG-I signaling may involve multiple mechanisms, including competition with RIGI for binding to viral RNA, direct binding to RIGI to impede dimerization and interaction with MAVS/IPS1, and competition with IKBKE for binding to MAVS/IPS1, thereby hindering IRF3 activation. Conversely, its positive regulatory role may encompass activities such as unwinding or stripping nucleoproteins from viral RNA, thereby facilitating recognition by RIGI and IFIH1/MDA5. LGP2 plays a crucial role in the innate immune response to various RNA viruses, DNA viruses like poxviruses and coronavirus SARS-CoV-2, as well as the bacterial pathogen <i>Listeria monocytogenes</i>, highlighting its versatile involvement in antiviral defense. The protein exhibits affinity for both single-stranded and double-stranded RNA, with a preference for 5'-triphosphorylated RNA, although it can recognize RNA lacking this modification.</p>
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**Caution: Product has not been fully validated for medical applications. For research use only.**

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