



**LD Biopharma, Inc.**  
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## - PRODUCT DATA SHEET -

**Name of Product:** Recombinant Human RGS2 Protein  
**Catalog Number:** hRP-0831  
**Manufacturer:** LD Biopharma, Inc.

### Introduction

Regulator of G protein signaling (RGS) family members are regulatory molecules that act as GTPase activating proteins (GAPs) for G alpha subunits of heterotrimeric G proteins. RGS proteins are able to deactivate G protein subunits of the Gi alpha, Go alpha and Gq alpha subtypes. They drive G proteins into their inactive GDP-bound forms. Regulator of G protein signaling 2 (RGS2) belongs to this family. mRNA profiling of human RGS2 indicated that this gene mainly expressed in CD33<sup>+</sup> myeloid, CD14<sup>+</sup> monocytes and BDCA4<sup>+</sup> dendritic cells. The protein acts as a mediator of myeloid differentiation and may play a role in leukemogenesis.

Full-length human RGS2 (211 aa) gene was constructed with 17 aa N-terminal T7 tag and expressed in E.coli as inclusion bodies. The final product was refolded using our unique “temperature shift inclusion body refolding” technology and chromatographically purified.

<b>Gene Symbol:</b>	RGS2	(G0S8)
<b>Accession Number:</b>	NP_002914	
<b>Species:</b>	Human	
<b>Size:</b>	50 µg / Vial	
<b>Composition:</b>	0.2 mg/ml, sterile-filtered, in 20 mM pH 8.0 Tris-HCl Buffer, with proprietary formulation of NaCl, KCl, EDTA, arginine, DTT and Glycerol.	
<b>Storage:</b>	In Liquid. Keep at -80°C for long term storage. Product is stable at 4 °C for at least 30 days.	

### Key References

Wolff,D.W., et al., *Epigenetic repression of regulator of G-protein signaling 2 promotes androgen-independent prostate cancer cell growth*. Int. J. Cancer 130 (7), 1521-1531 (2012)

Holden,N.S., et al., *beta2-Adrenoceptor agonist-induced RGS2 expression is a genomic*



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*mechanism of bronchoprotection that is enhanced by glucocorticoids.* Proc. Natl. Acad. Sci. U.S.A. 108 (49), 19713-19718 (2011)

Seredenina, T., et al., *Decreased striatal RGS2 expression is neuroprotective in Huntington's disease (HD) and exemplifies a compensatory aspect of HD-induced gene regulation.* PLoS ONE 6 (7), E22231 (2011)

## **Applications**

1. May be used for in vitro RGS2 mediated tumogenesis pathway regulation study with intracellular delivery of this protein.
2. As soluble / native protein, may be used as enzymatic substrate protein for kinase and ubiquitin assay development.
3. May be used for mapping RGS2 protein-protein interaction.
4. May be used as antigen for specific antibody development.

## **Quality Control**

1. Purity: > 90% by SDS-PAGE.

## **Recombinant Protein Sequence**

MASMTGGQQMGRGEFGSMQSAMFLAVQHDCRPMDKSAGSGHKSEEKREKMKRLLKDWKTRLSY  
FLQNSSTPGKPKTGKKSKQQAFIKPSPEEAQLWSEAFDELLASKYGLAAFRAFLKSEFCENIE  
FWLACEDFKKTKSPQKLSSKARKIYTDFIEKEAPKEINIDFQTKTLIAQNIQEATSGCFTTAQK  
RVYSLMENNSYPRFLESEFYQDLCKKPQITTEPHAT