SANTA CRUZ BIOTECHNOLOGY, INC.

# GULP siRNA (m): sc-62428

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*The Power to Question*

## BACKGROUND

GULP (engulfment adaptor PTB domain containing 1) is a 304 amino acid protein encoded by the human gene GULP1. GULP is believed to function as an adapter protein, as it is required for efficient phagocytosis of apoptotic cells. GULP also helps modulate cellular glycosphingolipid and cholesterol transport. It also may play a role in the internalization and endosomal trafficking of various LRP1 ligands, such as PSAP. Increased cytoplasmic levels of GULP are associated with increases in cellular levels of GTP-bound ARF6. Found as a homodimer, GULP, interacts with Clathrin, GDP-bound ARF6, but not with GTP-bound ARF6. It is also found as part of a complex composed of GULP1, CENTB1 and ARF6. GULP is widely expressed and can be detected in macrophages, pancreas, kidney, skeletal muscle, heart, colon, intestine, lung, placenta and ovary.

## REFERENCES


1. Liu, Q.A., et al. 1998. Candidate adaptor protein CED-6 promotes the engulfment of apoptotic cells in *C. elegans*. Cell 93: 961-972.
2. Liu, Q.A., et al. 2000. Human CED-6 encodes a functional homologue of the *Caenorhabditis elegans* engulfment protein CED-6. Curr. Biol. 9: 1347-1350.
3. Smits, E., et al. 2000. The human homologue of *Caenorhabditis elegans* CED-6 specifically promotes phagocytosis of apoptotic cells. Curr. Biol. 9: 1351-1354.
4. Su, H.P., et al. 2000. Identification and characterization of a dimerization domain in CED-6, an adapter protein involved in engulfment of apoptotic cells. J. Biol. Chem. 275: 9542-9549.
5. Su, H.P., et al. 2002. Interaction of CED-6/GULP, an adapter protein involved in engulfment of apoptotic cells with CED-1 and CD91/low density lipoprotein receptor-related protein (LRP). J. Biol. Chem. 277: 11772-11779.
6. Banerjee, H., et al. 2003. Identification of a mouse orthologue of the CED-6 gene of *Caenorhabditis elegans*. Plasmid 49: 30-33.
7. Kiss, R.S., et al. 2006. The lipoprotein receptor-related protein-1 (LRP) adapter protein GULP mediates trafficking of the LRP ligand prosaposin, leading to sphingolipid and free cholesterol accumulation in late endosomes and impaired efflux. J. Biol. Chem. 281: 12081-12092.


## CHROMOSOMAL LOCATION

Genetic locus: Gulp1 (mouse) mapping to 1 C1.1.

## PRODUCT

GULP siRNA (m) is a pool of 3 target-specific 19-25 nt siRNAs designed to knock down gene expression. Each vial contains 3.3 nmol of lyophilized siRNA, sufficient for a 10 µM solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see GULP shRNA Plasmid (m): sc-62428-SH and GULP shRNA (m) Lentiviral Particles: sc-62428-V as alternate gene silencing products.

For independent verification of GULP (m) gene silencing results, we also provide the individual siRNA duplex components. Each is available as 3.3 nmol of lyophilized siRNA. These include: sc-62428A, sc-62428B and sc-62428C.

## STORAGE AND RESUSPENSION

Store lyophilized siRNA duplex at -20° C with desiccant. Stable for at least one year from the date of shipment. Once resuspended, store at -20° C, avoid contact with RNAses and repeated freeze thaw cycles.

Resuspend lyophilized siRNA duplex in 330 µl of the RNAse-free water provided. Resuspension of the siRNA duplex in 330 µl of RNAse-free water makes a 10 µM solution in a 10 µM Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

## APPLICATIONS

GULP siRNA (m) is recommended for the inhibition of GULP expression in mouse cells.

## SUPPORT REAGENTS

For optimal siRNA transfection efficiency, Santa Cruz Biotechnology's siRNA Transfection Reagent: sc-29528 (0.3 ml), siRNA Transfection Medium: sc-36868 (20 ml) and siRNA Dilution Buffer: sc-29527 (1.5 ml) are recommended. Control siRNAs or Fluorescein Conjugated Control siRNAs are available as 10 µM in 66 µl. Each contain a scrambled sequence that will not lead to the specific degradation of any known cellular mRNA. Fluorescein Conjugated Control siRNAs include: sc-36869, sc-44239, sc-44240 and sc-44241. Control siRNAs include: sc-37007, sc-44230, sc-44231, sc-44232, sc-44233, sc-44234, sc-44235, sc-44236, sc-44237 and sc-44238.

## GENE EXPRESSION MONITORING

GULP (E-4): sc-374591 is recommended as a control antibody for monitoring of GULP gene expression knockdown by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) or immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

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) 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.

## RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor GULP gene expression knockdown using RT-PCR Primer: GULP (m)-PR: sc-62428-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

## 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.