Store at -20°C

#14239

SignalSilence® GABARAPL2 siRNA I

www.cellsignal.com

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New 07/14

Entrez-Gene ID #11345
UniProt ID #P60520

For Research Use Only. Not For Use In Diagnostic Procedures.

Species Cross-Reactivity: H

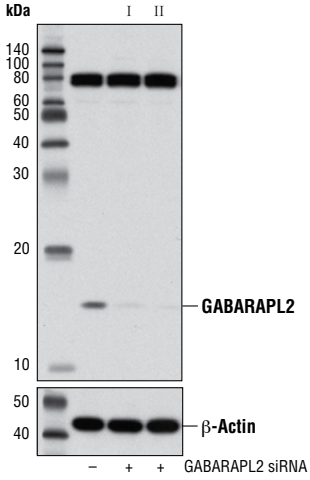
Description: SignalSilence® GABARAPL2 siRNA I from Cell Signaling Technology (CST) allows the researcher to specifically inhibit GABARAPL2 expression using RNA interference, a method whereby gene expression can be selectively silenced through the delivery of double stranded RNA molecules into the cell. All SignalSilence® siRNA products from CST are rigorously tested in-house and have been shown to reduce target protein expression by western analysis.

Background: $GABA_A$ receptor associated protein (GABARAP) is an Atg8 family protein with a key role in autophagy, which was originally discovered as a protein associated with the $GABA_A$ receptor regulating receptor trafficking to the plasma membrane (1). Proteins in this family, including microtubule-associated protein light chain 3 (LC3) and GATE-16, become incorporated into the autophagosomal membranes following autophagic stimuli such as starvation (2). Like the other family members, GABARAP is cleaved at its carboxyl terminus, which leads to conjugation by either of the phospholipids phosphatidylethanolamine or phosphatidylserine (3,4). This processing converts GABARAP from a type I to a type II membrane bound form involved in autophagosome biogenesis. Processing of GABARAP involves cleavage by Atg4 family members (5,6) followed by conjugation by the E1 and E2 like enzymes Atg7 and Atg3 (7,8). GABARAPL1/GEC1, a protein that is highly related to GABARAP, was identified as an estrogen inducible gene, and is also associated with autophagosomes (9-11).

Directions for Use: CST recommends transfection with 100 nM SignalSilence® GABARAPL2 siRNA I 48 to 72 hours prior to cell lysis. For transfection procedure, follow the protocol provided by the transfection reagent manufacturer. Please feel free to contact CST with any questions on use.

Each vial contains the equivalent of 100 transfections, which corresponds to a final siRNA concentration of 100 nM per transfection in a 24-well plate with a total volume of 300 µl per well.

Quality Control: Oligonucleotide synthesis is monitored base by base through trityl analysis to ensure appropriate coupling efficiency. The oligo is subsequently purified by affinity-solid phase extraction. The annealed RNA duplex is further analyzed by mass spectrometry to verify the exact composition of the duplex. Each lot is compared to the previous lot by mass spectrometry to ensure maximum lot-to-lot consistency.



Western blot analysis of extracts from 293T cells, transfected with 100 nM SignalSilence® Control siRNA (Unconjugated) #6568 (-), SignalSilence® GABARAPL2 siRNA I (+), or SignalSilence® GABARAPL2 siRNA II #14246 (+), using GABARAPL2 (D1W9T) Rabbit mAb #14256 (upper) or β-Actin (D6A8) Rabbit mAb #8457 (lower). The GABARAPL2 (D1W9T) Rabbit mAb confirms silencing of GABARAPL2 expression, while the β-Actin (D6A8) Rabbit mAb is used as a loading control.

Storage: GABARAPL2 siRNA I is supplied in RNAse-free water. *Aliquot and store at -20°C.*

For product specific protocols and a complete listing of recommended companion products please see the product web page at www.cellsignal.com

Background References:

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