

Store at
-20°C

SignalSilence® LC3B siRNA II



#6213

10 µM in 300 µl (100 transfections)

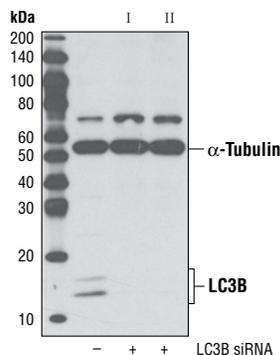
Support: +1-978-867-2388 (U.S.)
www.cellsignal.com/supportOrders: 877-616-2355 (U.S.)
orders@cellsignal.comEntrez-Gene ID #81631
UniProt ID #Q9GZQ8

rev. 09/08/16

For Research Use Only. Not For Use In Diagnostic Procedures.**Species Cross-Reactivity: H**

Description: SignalSilence® LC3B siRNA II from Cell Signaling Technology (CST) allows the researcher to specifically inhibit LC3B expression using RNA interference, a method whereby gene expression can be selectively silenced through the delivery of double stranded RNA molecules into the cell. LC3B siRNA II will not inhibit expression of LC3A or LC3C. All SignalSilence® siRNA products from CST are rigorously tested in-house and have been shown to reduce target protein expression by western analysis.

Background: Autophagy is a catabolic process for the autophagosomal-lysosomal degradation of bulk cytoplasmic contents (1,2). Autophagy is generally activated by conditions of nutrient deprivation, but it has also been associated with a number of physiological processes including development, differentiation, neurodegenerative diseases, infection, and cancer (3). Autophagy marker Light Chain 3 (LC3) was originally identified as a subunit of microtubule-associated proteins 1A and 1B (termed MAP1LC3) (4) and subsequently found to contain similarity to the yeast protein Apg8/Aut7/Cvt5 critical for autophagy (5). Three human LC3 isoforms (LC3A, LC3B, and LC3C) undergo post-translational modifications during autophagy (6-9). Cleavage of LC3 at the carboxy terminus immediately following synthesis yields the cytosolic LC3-I form. During autophagy, LC3-I is converted to LC3-II through lipidation by a ubiquitin-like system involving Atg7 and Atg3 that allows for LC3 to become associated with autophagic vesicles (6-10). The presence of LC3 in autophagosomes and the conversion of LC3 to the lower migrating form, LC3-II, have been used as indicators of autophagy (11).



Western blot analysis of extracts from HeLa cells, transfected with 100 nM SignalSilence® Control siRNA (Unconjugated) #6568 (-), SignalSilence® LC3B siRNA I #6212 (+) or SignalSilence® LC3B siRNA II (+), using LC3B (D11) XP® Rabbit mAb #3868 and α-Tubulin (11H10) Rabbit mAb #2125. The LC3B (D11) XP® Rabbit mAb confirms silencing of LC3B expression, while the α-Tubulin (11H10) Rabbit mAb is used to control for loading and specificity of LC3B siRNA.

Storage: SignalSilence® siRNA 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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- (3) Levine, B. and Yuan, J. (2005) *J. Clin. Invest.* 115, 2679-88.
- (4) Mann, S.S. and Hammarback, J.A. (1994) *J. Biol. Chem.* 269, 11492-97.
- (5) Lang, T. et al. (1998) *EMBO J.* 17, 3597-607.
- (6) Kabeya, Y. et al. (2000) *EMBO J.* 19, 5720-28.
- (7) He, H. et al. (2003) *J. Biol. Chem.* 278, 29278-87.
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- (10) Ichimura, Y. et al. (2000) *Nature* 408, 488-92.
- (11) Kabeya, Y. et al. (2004) *J. Cell Sci.* 117, 2805-12.

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Applications: W—Western IP—Immunoprecipitation IHC—Immunohistochemistry ChIP—Chromatin Immunoprecipitation IF—Immunofluorescence F—Flow cytometry E-P—ELISA-Peptide **Species Cross-Reactivity:** H—human M—mouse R—rat Hm—hamster Mk—monkey Mi—mink C—chicken Dm—D. melanogaster X—Xenopus Z—zebrafish B—bovine Dg—dog Pg—pig Sc—S. cerevisiae Ce—C. elegans Hr—Horse All—all species expected Species enclosed in parentheses are predicted to react based on 100% homology.