

# **Product datasheet for KN213332RB**

### OriGene Technologies, Inc.

9620 Medical Center Drive, Ste 200 Rockville, MD 20850, US Phone: +1-888-267-4436 https://www.origene.com techsupport@origene.com EU: info-de@origene.com CN: techsupport@origene.cn

## Hamartin (TSC1) Human Gene Knockout Kit (CRISPR)

#### **Product data:**

**Product Type:** Knockout Kits (CRISPR)

**Format:** 2 gRNA vectors, 1 RFP-BSD donor, 1 scramble control

Donor DNA: RFP-BSD
Symbol: Hamartin
Locus ID: 7248

**Components: KN213332G1**, Hamartin gRNA vector 1 in pCas-Guide CRISPR vector (GE100002)

**KN213332G2**, Hamartin gRNA vector 2 in pCas-Guide CRISPR vector (GE100002) **KN213332RBD**, donor DNA containing left and right homologous arms and RFP-BSD

functional cassette.

GE100003, scramble sequence in pCas-Guide vector

**Disclaimer:** These products are manufactured and supplied by OriGene under license from ERS. The kit is

designed based on the best knowledge of CRISPR technology. The system has been functionally validated for knocking-in the cassette downstream the native promoter. The efficiency of the knock-out varies due to the nature of the biology and the complexity of the

experimental process.

RefSeq: NM 000368, NM 001008567, NM 001162426, NM 001162427, N63914, NM 001362177

UniProt ID: Q92574
Synonyms: LAM; TSC

**Summary:** This gene is a tumor suppressor gene that encodes the growth inhibitory protein hamartin.

The encoded protein interacts with and stabilizes the GTPase activating protein tuberin. This hamartin-tuberin complex negatively regulates mammalian target of rapamycin complex 1 (mTORC1) signalling which is a major regulator of anabolic cell growth. This protein also functions as a co-chaperone for Hsp90 that inhibits its ATPase activity. This protein functions as a facilitator of Hsp90-mediated folding of kinase and non-kinase clients, including Tsc2 and thereby preventing their ubiquitination and proteasomal degradation. Mutations in this gene

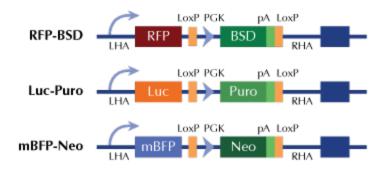
have been associated with tuberous sclerosis. [provided by RefSeq, Apr 2018]





# **Product images:**

### Donor Vector Edited Chromosome



RFP, Luc, and mBFP will be under native gene promoter