

## Product datasheet for **SR413437**

### Syt7 Mouse siRNA Oligo Duplex (Locus ID 54525)

#### Product data:

Product Type:	siRNA Oligo Duplexes
Purity:	HPLC purified
Quality Control:	Tested by ESI-MS
Sequences:	Available with shipment
Stability:	One year from date of shipment when stored at -20°C.
# of transfections:	Approximately 330 transfections/2nmol in 24-well plate under optimized conditions (final conc. 10 nM).
Note:	Single siRNA duplex (10nmol) can be ordered.
RefSeq:	<a href="#">NM_018801</a> , <a href="#">NM_173067</a> , <a href="#">NM_173068</a>
UniProt ID:	<a href="#">Q9R0N7</a>
Synonyms:	AI851541; B230112P13Rik
Components:	Syt7 (Mouse) - 3 unique 27mer siRNA duplexes - 2 nmol each (Locus ID 54525) Included - SR30004, Trilencer-27 Universal Scrambled Negative Control siRNA Duplex - 2 nmol Included - SR30005, RNase free siRNA Duplex Resuspension Buffer - 2 ml



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**Summary:**

Ca(2+) sensor involved in Ca(2+)-dependent exocytosis of secretory and synaptic vesicles through Ca(2+) and phospholipid binding to the C2 domain. Ca(2+) induces binding of the C2-domains to phospholipid membranes and to assembled SNARE-complexes; both actions contribute to triggering exocytosis. SYT7 binds Ca(2+) with high affinity and slow kinetics compared to other synaptotagmins (PubMed:26738595). Involved in Ca(2+)-triggered lysosomal exocytosis, a major component of the plasma membrane repair (By similarity). Ca(2+)-regulated delivery of lysosomal membranes to the cell surface is also involved in the phagocytic uptake of particles by macrophages (PubMed:16982801, PubMed:21041449). Ca(2+)-triggered lysosomal exocytosis also plays a role in bone remodeling by regulating secretory pathways in osteoclasts and osteoblasts (PubMed:18539119). Involved in cholesterol transport from lysosome to peroxisome by promoting membrane contacts between lysosomes and peroxisomes: probably acts by promoting vesicle fusion by binding phosphatidylinositol-4,5-bisphosphate on peroxisomal membranes (PubMed:25860611). Acts as a key mediator of synaptic facilitation, a process also named short-term synaptic potentiation: synaptic facilitation takes place at synapses with a low initial release probability and is caused by influx of Ca(2+) into the axon terminal after spike generation, increasing the release probability of neurotransmitters (PubMed:24569478, PubMed:26738595). Probably mediates synaptic facilitation by directly increasing the probability of release (PubMed:26738595). May also contribute to synaptic facilitation by regulating synaptic vesicle replenishment, a process required to ensure that synaptic vesicles are ready for the arrival of the next action potential: SYT7 is required for synaptic vesicle replenishment by acting as a sensor for Ca(2+) and by forming a complex with calmodulin (PubMed:24569478). Also acts as a regulator of Ca(2+)-dependent insulin and glucagon secretion in beta-cells (PubMed:18308938, PubMed:19171650). Triggers exocytosis by promoting fusion pore opening and fusion pore expansion in chromaffin cells (PubMed:20956309). Also regulates the secretion of some non-synaptic secretory granules of specialized cells (By similarity). [UniProtKB/Swiss-Prot Function]

**Performance Guaranteed:**

OriGene guarantees that at least two of the three Dicer-Substrate duplexes in the kit will provide at least 70% or more knockdown of the target mRNA when used at 10 nM concentration by quantitative RT-PCR when the TYE-563 fluorescent transfection control duplex (cat# SR30002) indicates that >90% of the cells have been transfected and the HPRT positive control (cat# SR30003) provides 90% knockdown efficiency.

For non-conforming siRNA, requests for replacement product must be made within ninety (90) days from the date of delivery of the siRNA kit. To arrange for a free replacement with newly designed duplexes, please contact Technical Services at [techsupport@origene.com](mailto:techsupport@origene.com). Please provide your data indicating the transfection efficiency and measurement of gene expression knockdown compared to the scrambled siRNA control (quantitative RT-PCR data required).