

## Product datasheet for **SR419489**

### Irak1 Mouse siRNA Oligo Duplex (Locus ID 16179)

#### 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_001177973</a> , <a href="#">NM_001177974</a> , <a href="#">NM_001177975</a> , <a href="#">NM_001177976</a> , <a href="#">NM_008363</a>  |
| UniProt ID:         | <a href="#">Q62406</a>   |
| Synonyms:           | AA408924; Il1rak; IRAK; IRAK-1; IRAK1-S; IRAK1b; mPLK; Plpk  |
| Components:         | Irak1 (Mouse) - 3 unique 27mer siRNA duplexes - 2 nmol each (Locus ID 16179)<br>Included - SR30004, Trilencer-27 Universal Scrambled Negative Control siRNA Duplex - 2 nmol<br>Included - SR30005, RNase free siRNA Duplex Resuspension Buffer - 2 ml  |
| Summary:            | Serine/threonine-protein kinase that plays a critical role in initiating innate immune response against foreign pathogens. Involved in Toll-like receptor (TLR) and IL-1R signaling pathways. Is rapidly recruited by MYD88 to the receptor-signaling complex upon TLR activation. Association with MYD88 leads to IRAK1 phosphorylation by IRAK4 and subsequent autophosphorylation and kinase activation. Phosphorylates E3 ubiquitin ligases Pellino proteins (PELI1, PELI2 and PELI3) to promote pellino-mediated polyubiquitination of IRAK1. Then, the ubiquitin-binding domain of IKBKG/NEMO binds to polyubiquitinated IRAK1 bringing together the IRAK1-MAP3K7/TAK1-TRAF6 complex and the NEMO-IKKA-IKKB complex. In turn, MAP3K7/TAK1 activates IKKs (CHUK/IKKA and IKBKB/IKKB) leading to NF-kappa-B nuclear translocation and activation. Alternatively, phosphorylates TIRAP to promote its ubiquitination and subsequent degradation. Phosphorylates the interferon regulatory factor 7 (IRF7) to induce its activation and translocation to the nucleus, resulting in transcriptional activation of type I IFN genes, which drive the cell in an antiviral state. When sumoylated, translocates to the nucleus and phosphorylates STAT3 (By similarity).<br>[UniProtKB/Swiss-Prot Function] |



[View online »](#)

**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).