

## DESCRIPTION

|                           |                                                                                                                                                                                                               |
|---------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Species Reactivity</b> | Human                                                                                                                                                                                                         |
| <b>Specificity</b>        | Detects human LRRC52 in direct ELISAs.                                                                                                                                                                        |
| <b>Source</b>             | Monoclonal Mouse IgG <sub>1</sub> Clone # 1037552                                                                                                                                                             |
| <b>Purification</b>       | Protein A or G purified from hybridoma culture supernatant                                                                                                                                                    |
| <b>Immunogen</b>          | Human embryonic kidney cell HEK293-derived human LRRC52 Ser24-Asp244<br>Accession # Q8N7C0                                                                                                                    |
| <b>Formulation</b>        | Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details.<br>*Small pack size (-SP) is supplied either lyophilized or as a 0.2 µm filtered solution in PBS. |

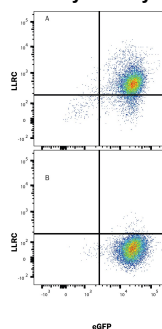
## APPLICATIONS

**Please Note:** Optimal dilutions should be determined by each laboratory for each application. [General Protocols](#) are available in the Technical Information section on our website.

|                       | <b>Recommended Concentration</b> | <b>Sample</b>                                                 |
|-----------------------|----------------------------------|---------------------------------------------------------------|
| <b>Flow Cytometry</b> | 0.25 µg/10 <sup>6</sup> cells    | HEK293 Human Cell Line Transfected with Human LRRC52 and eGFP |

## DATA

### Flow Cytometry



**Detection of LRRC52 in HEK293 Human Cell Line Transfected with Human LRRC52 and eGFP by Flow Cytometry** HEK293 human embryonic kidney cell line transfected with (A) human LRRC52 or (B) irrelevant protein, and eGFP was stained with Mouse Anti-Human LRRC52 Monoclonal Antibody (Catalog # MAB10260) followed by Allophycocyanin-conjugated Anti-Mouse IgG Secondary Antibody (Catalog # F0101B). Quadrant markers were set based on control antibody staining (Catalog # MAB002). Staining was performed using our Staining Membrane-associated Proteins protocol.

## PREPARATION AND STORAGE

|                                |                                                                                                                                                                                                                                                                                                                                                    |
|--------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Reconstitution</b>          | Reconstitute at 0.5 mg/mL in sterile PBS.                                                                                                                                                                                                                                                                                                          |
| <b>Shipping</b>                | The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.<br>*Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C                                                                                                                 |
| <b>Stability &amp; Storage</b> | <b>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</b> <ul style="list-style-type: none"> <li>12 months from date of receipt, -20 to -70 °C as supplied.</li> <li>1 month, 2 to 8 °C under sterile conditions after reconstitution.</li> <li>6 months, -20 to -70 °C under sterile conditions after reconstitution.</li> </ul> |

## BACKGROUND

LRRC52 (Leucine-rich repeat-containing protein 52) belongs to an extracellular leucine-rich-repeat-only (Elron) cluster, which includes five other LRRC proteins: LRRC26, LRRC38, LRRC55, LRTM1 and LRTM2 (1). Elron cluster members are type I transmembrane proteins with an extracellular domain (ECD) containing several LRR motifs and a cytoplasmic C-terminal tail with a short stretch of acidic residues (1). The mature ECD of LRRC52 is 221 amino acids (aa), containing 5 LRR motifs, and shares 76% and 78% identity with mouse and rat LRRC52, respectively. LRRC-52 is dominantly expressed in testis and skeletal muscle and is also detected in several other tissues including placenta, kidney, lung, and some glands (2, 3). LRRC52 has been identified as a testes specific SLO3 K<sup>+</sup> channel accessory protein in mouse (2). LRRC52 is proposed to be essential for alkalization dependent activation of the K<sub>Sper</sub> current at physiological membrane potentials and pH (2). Activation of the SLO3 channel is critical in the fertilization process and loss of function results in infertility (2, 4, 5). A second Elron cluster protein, LRRC26, was recently identified as a regulatory subunit of SLO1 BK-type K<sup>+</sup> channels, suggesting a general function for the entire family (6). Based on function, LRRC52 might be a therapeutic target for male contraception (7).

## References:

1. Dolan, J. *et al.* (2007) BMC Genomics **8**:320.
2. Yang, C. *et al.* (2011) PNAS **108**:19419.
3. Leonetti, M. *et al.* (2012) PNAS. **109**:19274.
4. Navarro, B. *et al.* (2007) PNAS **104**:7688.
5. Sanit, C. *et al.* (2010) FEBS Lett. **584**:1041.
6. Yan, J. and Aldrich, RW. (2010) Nature **466**:513.
7. Zeng, XH. *et al.* (2015) PNAS **112**:2599.