

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human LCCC52 in direct ELISAs.
Source	Monoclonal Mouse IgG ₁ Clone # 1037552
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Human embryonic kidney cell HEK293-derived human LRRC52 Ser24-Asp244 Accession # Q8N7C0
Conjugate	Alexa Fluor 700 Excitation Wavelength: 675-700 nm Emission Wavelength: 723 nm
Formulation	Supplied 0.2 mg/mL in a saline solution containing BSA and Sodium Azide. *Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions.

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.

	Recommended Concentration	Sample
Flow Cytometry	0.25-1 µg/mL	HEK293 Human Cell Line Transfected with Human LRRC52 and eGFP

PREPARATION AND STORAGE

Shipping	The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	Protect from light. Do not freeze. 12 months from date of receipt, 2 to 8 °C as supplied.

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⁺ channel accessory protein in mouse (2). LRRC52 is proposed to be essential for alkalization dependent activation of the K_{Sp}er 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⁺ 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.

PRODUCT SPECIFIC NOTICES

This product is provided under an agreement between Life Technologies Corporation and R&D Systems, Inc, and the manufacture, use, sale or import of this product is subject to one or more US patents and corresponding non-US equivalents, owned by Life Technologies Corporation and its affiliates. The purchase of this product conveys to the buyer the non-transferable right to use the purchased amount of the product and components of the product only in research conducted by the buyer (whether the buyer is an academic or for-profit entity). The sale of this product is expressly conditioned on the buyer not using the product or its components (1) in manufacturing; (2) to provide a service, information, or data to an unaffiliated third party for payment; (3) for therapeutic, diagnostic or prophylactic purposes; (4) to resell, sell, or otherwise transfer this product or its components to any third party, or for any other commercial purpose. Life Technologies Corporation will not assert a claim against the buyer of the infringement of the above patents based on the manufacture, use or sale of a commercial product developed in research by the buyer in which this product or its components was employed, provided that neither this product nor any of its components was used in the manufacture of such product. For information on purchasing a license to this product for purposes other than research, contact Life Technologies Corporation, Cell Analysis Business Unit, Business Development, 29851 Willow Creek Road, Eugene, OR 97402, Tel: (541) 465-8300. Fax: (541) 335-0354.