

#### DESCRIPTION

<b>Species Reactivity</b>	Mouse
<b>Specificity</b>	Detects mouse LRIG1 in direct ELISAs. In direct ELISAs, no cross-reactivity with recombinant human LRIG3 is observed.
<b>Source</b>	Monoclonal Rat IgG <sub>2A</sub> Clone # 440710
<b>Purification</b>	Protein A or G purified from hybridoma culture supernatant
<b>Immunogen</b>	Mouse myeloma cell line NS0-derived recombinant mouse LRIG1 Ala37-Thr794 Accession # P70193
<b>Endotoxin Level</b>	<0.10 EU per 1 µg of the antibody by the LAL method.
<b>Formulation</b>	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *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>Blockade of Receptor-ligand Interaction</b>	In a functional ELISA, 0.02-0.1 µg/mL of this antibody will block 50% of the binding of 250 ng/mL of Recombinant Human ErbB4/Her4 Fc Chimera (Catalog # 1131-ER) to immobilized Recombinant Mouse LRIG1 (Catalog # 3688-LR) coated at 2.5 µg/mL (100 µL/well). At 5 µg/mL, this antibody will block >90% of the binding.
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#### 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. *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

LRIG1 (formerly LIG-1) is one of three mammalian LRR (leucine-rich repeat) and Ig-like domain-containing type I transmembrane glycoproteins that share 45-50% amino acid (aa) identity (1, 2). All contain fifteen LRRs flanked by cysteine-rich regions and three C-type Ig-like domains within their extracellular domains (ECD) (1, 2). LRIG1 shows the highest expression in liver, brain, stomach, small intestine and skeletal muscle (2). Expression is prominent in certain epithelia and subsets of glial cells (1, 2). Within the cell, LRIG1 is expressed in the perinuclear region as well as on the surface. Mouse LRIG1 is synthesized with a 37 aa signal sequence, a 759 aa ECD, a 21 aa transmembrane sequence and a 295 aa intracellular region that binds the ubiquitin ligase, c-Cbl (3). LRIG1 binds the EGF receptor (ErbB1) or neuregulin receptors (ErbB2, 3 and 4) via either its LRR or Ig-like domains and promotes ubiquitination, internalization and destruction of these receptors (3, 4). Since LRIG1 modulates growth factor receptor expression, there is an inverse relationship between LRIG1 expression and proliferative capacity. Genetic disruption of mouse LRIG1 results in a psoriasis-like epidermal hyperplasia on the tail and facial area, which is consistent with downregulation of LRIG1 in human psoriatic lesions (5). High ratios of EGF R to LRIG1 in human renal cell carcinomas correlate with poor survival (6). In skin squamous cell carcinomas, high LRIG1 expression correlates with a more differentiated state and a survival benefit (7). Mouse LRIG1 ECD shows 90%, 93%, 90% and 87% aa identity with human, rat, bovine and canine LRIG1 ECD, respectively.

#### References:

1. Suzuki, Y. *et al.* (1996) *J. Biol. Chem.* **271**:22522.
2. Guo, D. *et al.* (2004) *Genomics* **84**:157.
3. Gur, G. *et al.* (2004) *EMBO J.* **23**:3270.
4. Laederich, M.B. (2004) *J. Biol. Chem.* **279**:47050.
5. Suzuki, Y. *et al.* (2002) *FEBS Lett.* **521**:67.
6. Thomasson, M. *et al.* (2003) *Br. J. Cancer* **89**:1285.
7. Tanemura, A. *et al.* (2005) *Dermatol. Surg.* **31**:423.