

DESCRIPTION

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| Species Reactivity | Human |
| Specificity | Detects human LRIG3 in direct ELISAs and Western blots. Detects mouse LRIG3 in Western blots. Mouse LRIG3 detection in Flow Cytometry was not tested. In direct ELISAs, no cross-reactivity with recombinant human LRIG1 is observed. |
| Source | Monoclonal Mouse IgG _{2B} Clone # 814834 |
| Purification | Protein A or G purified from hybridoma culture supernatant |
| Immunogen | Mouse myeloma cell line NS0-derived recombinant human LRIG3 Asp28-Thr807 Accession # Q6UXM1 |
| Conjugate | Alexa Fluor 647 Excitation Wavelength: 650 nm Emission Wavelength: 668 nm |
| Formulation | Supplied 0.2 mg/mL in a saline solution containing BSA and Sodium Azide. See Certificate of Analysis for details. *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/10 ⁶ cells | KATO-III human gastric carcinoma cell line |

PREPARATION AND STORAGE

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| 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. <ul style="list-style-type: none"> 12 months from date of receipt, 2 to 8 °C as supplied. |

BACKGROUND

LRIG3 (leucine-rich repeats and Ig-like domains-3) is an approximately 140-170 kDa type I transmembrane glycoprotein member of the mammalian LRIG glycoprotein family. This family contains three members who share 45 - 50% amino acid (aa) identity (1). All members contain at least fifteen LRRs, accompanied by two flanking cysteine-rich regions, and three C2-type Ig-like domains in their extracellular domains (ECD) (1). LRIG3 mRNA is widely expressed, with highest levels in stomach, skin, thyroid and small intestine (1). Human LRIG3 is synthesized as a 1120 amino acid (aa) precursor. It contains a 24 aa signal sequence, a 786 aa ECD, a 21 aa transmembrane sequence, and a 289 aa intracellular region. One splice variant exists that has a 19 aa substitution for the first 79 aa of the standard (or long) form. This substitution appears to encode an alternate signal sequence, resulting in a mature protein that lacks the first and part of the second LRR. LRIG1, a related family member, is known to bind the EGF family receptors ErbB1-4, via either its LRR or Ig-like domains. It also binds the ubiquitin ligase, c-Cbl, and promotes ubiquitination, internalization and destruction of these receptors (2, 3). It is not known whether LRIG3 performs similar functions. Within the cell, LRIG3 is expressed in the perinuclear region as well as on the cell surface. Perinuclear location of LRIG3 in grade III and IV astrocytic tumors has been associated with better patient survival (4). Human LRIG3 ECD shares 91%, 92%, 95% and 98% aa sequence identity with mouse, rat, bovine and canine LRIG3 ECD, respectively.

References:

1. Guo, D. *et al.* (2004) *Genomics* **84**:157.
2. Gur, G. *et al.* (2004) *EMBO J.* **23**:3270.
3. Laederich, M.B. (2004) *J. Biol. Chem.* **279**:47050.
4. Guo, D. *et al.* (2006) *Acta Neuropathol. (Berl.)* **111**:238.

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