

DESCRIPTION

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
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied as a 0.2 µm filtered solution in PBS.

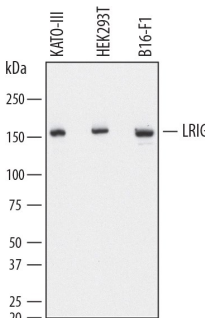
APPLICATIONS

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.

	Recommended Concentration	Sample
Western Blot	1 µg/mL	See Below
Flow Cytometry	2.5 µg/10 ⁶ cells	See Below
CyTOF-ready	Ready to be labeled using established conjugation methods. No BSA or other carrier proteins that could interfere with conjugation.	

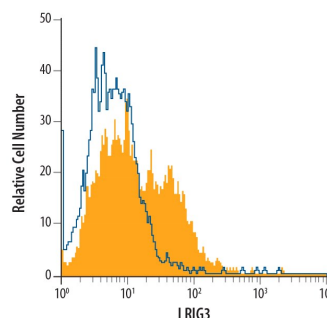
DATA

Western Blot



Detection of Human and Mouse LRIG3 by Western Blot. Western blot shows lysates of KATO-III human gastric carcinoma cell line, HEK293T human embryonic kidney cell line, and B16-F1 mouse melanoma cell line. PVDF membrane was probed with 1 µg/mL of Mouse Anti-Human LRIG3 Monoclonal Antibody (Catalog # MAB3495) followed by HRP-conjugated Anti-Mouse IgG Secondary Antibody (Catalog # HAF007). A specific band was detected for LRIG3 at approximately 160 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 1.

Flow Cytometry



Detection of LRIG3 in KATO-III Human Cell Line by Flow Cytometry. KATO-III human gastric carcinoma cell line was stained with Mouse Anti-Human LRIG3 Monoclonal Antibody (Catalog # MAB3495, filled histogram) or isotype control antibody (Catalog # MAB0041, open histogram), followed by Phycoerythrin-conjugated Anti-Mouse IgG Secondary Antibody (Catalog # F0102B).

PREPARATION AND STORAGE

Reconstitution	Sterile PBS to a final concentration of 0.5 mg/mL.
Shipping	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
Stability & Storage	Use a manual defrost freezer and avoid repeated freeze-thaw cycles. <ul style="list-style-type: none"> • 12 months from date of receipt, -20 to -70 °C as supplied. • 1 month, 2 to 8 °C under sterile conditions after reconstitution. • 6 months, -20 to -70 °C under sterile conditions after reconstitution.

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.

