

**DESCRIPTION**

<b>Source</b>	Chinese Hamster Ovary cell line, CHO-derived human LRIG2 protein		
	Human LRIG-2 (Gly41-Thr805) Accession # O94898	IEGRMD	Human IgG <sub>1</sub> (Pro100-Lys330)
	N-terminus		C-terminus
<b>N-terminal Sequence</b>	Gly41		
<b>Analysis</b>			
<b>Structure / Form</b>	Disulfide-linked homodimer		
<b>Predicted Molecular Mass</b>	112 kDa		

**SPECIFICATIONS**

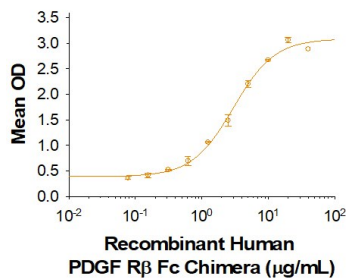
<b>SDS-PAGE</b>	125-145 kDa, reducing conditions
<b>Activity</b>	Measured by its binding ability in a functional ELISA. When Recombinant Human LRIG2 Fc Chimera is immobilized at 4 µg/mL (100 µL/well), the concentration of Recombinant Human PDGF R beta Recombinant Human PDGF Rβ Fc Chimera (Catalog # 385-PR) that produces 50% of the optimal binding response is 1.5-9 µg/mL.
<b>Endotoxin Level</b>	<0.10 EU per 1 µg of the protein by the LAL method.
<b>Purity</b>	>95%, by SDS-PAGE visualized with Silver Staining and quantitative densitometry by Coomassie® Blue Staining.
<b>Formulation</b>	Lyophilized from a 0.2 µm filtered solution in PBS. See Certificate of Analysis for details.

**PREPARATION AND STORAGE**

<b>Reconstitution</b>	Reconstitute at 500 µg/mL in PBS.
<b>Shipping</b>	The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.
<b>Stability &amp; Storage</b>	<p><b>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</b></p> <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>• 3 months, ≤ -20 °C under sterile conditions after reconstitution.</li> </ul>

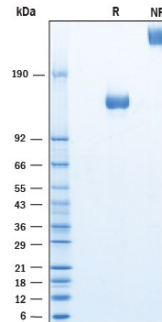
**DATA**

**Binding Activity**



When Recombinant Human LRIG2 Fc Chimera (Catalog # 1941-LR) is coated at 4 µg/mL, 100 µL/well, Recombinant Human PDGF Rβ Fc Chimera (Catalog # 385-PR) binds with an ED<sub>50</sub> of 1.5-9 µg/mL.

**SDS-PAGE**



2 µg/lane of Recombinant Human LRIG2 Fc Chimera was resolved with SDS-PAGE under reducing (R) and non-reducing (NR) conditions and visualized by Coomassie® Blue staining, showing bands at 125-145 kDa and 250-290 kDa, respectively.

**BACKGROUND**

LRIG2 (leucine-rich repeats and Ig-like domains-2), also known as LIG-2, is a type I transmembrane glycoprotein member of the mammalian LRIG glycoprotein family (1). This family contains three members who share 45-50% amino acid (aa) identity (1). Human LRIG2 is synthesized as large precursor molecule, containing a signal sequence, a 767 amino acid (aa) extracellular domain (ECD), a single transmembrane sequence, and a 237 aa intracellular region. In the ECD, all LRIG family 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) (1-3). The ECD of human LRIG2 shares 94% and 93% aa sequence identity with mouse and rat, respectively. LRIG2 might have a function different from that of LRIG1, and possibly contribute to the etiology of oligodendroglioma (4). It was previously demonstrated that LRIG2 positively regulates epidermal growth factor receptor (EGFR) signaling, the most common aberrant receptor tyrosine kinase (RTK) signaling in glioblastoma multiforme (GBM), which promotes GBM growth. LRIG2 has the ability to physically interact with PDGFR $\beta$ , promoting the total expression and the activation of PDGF R $\beta$ , and enhancing its downstream signaling pathways of Akt and STAT3 and the effectors of key regulators of cell cycle progression, resulting in increased GBM cell proliferation (5).

**References:**

1. Guo, D. *et al.* (2004) *Genomics* **84**:157.
2. Holmlund, C. *et al.* (2004) *Gene* **332**:35.
3. Wang, B. *et al.* (2009) *Cancer Biol Ther.* **8**:1018.
4. Holmlund C *et al.* (2009) *Neuropathology.* **29**:242.
5. Qungen Xiao *et al.* (2018) *Int J Oncol.* **53**:1069.