

**DESCRIPTION**

|                                 |   |        |   |
|---------------------------------|---|--------|---|
| <b>Source</b>                   | Human embryonic kidney cell, HEK293-derived cynomolgus monkey 5T4 protein |        |   |
|                                 | Cynomolgus Monkey 5T4<br>(Thr35-Ser355)<br>Accession # Q4R8Y9             | IEGRMD | Human IgG <sub>1</sub><br>(Pro100-Lys330) |
|                                 | N-terminus  |        | C-terminus                                |
| <b>N-terminal Sequence</b>      | Thr35   |        |   |
| <b>Analysis</b>                 |   |        |   |
| <b>Structure / Form</b>         | Disulfide-linked homodimer  |        |   |
| <b>Predicted Molecular Mass</b> | 61 kDa  |        |   |

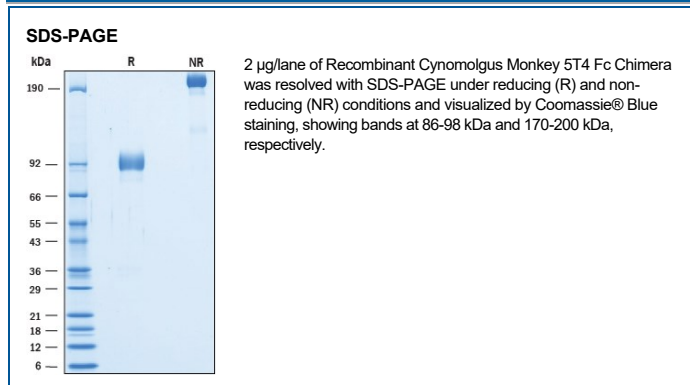
**SPECIFICATIONS**

|                        |   |
|------------------------|---|
| <b>SDS-PAGE</b>        | 86-98 kDa, reducing conditions  |
| <b>Activity</b>        | Measured by its binding ability in a functional ELISA.<br>When Recombinant Cynomolgus Monkey 5T4 Fc Chimera is immobilized at 2 µg/mL (100 µL/well), Biotinylated Recombinant Human Frizzled-8 Fc Chimera binds with an ED <sub>50</sub> of 4-24 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 at ambient temperature. 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 to -70 °C under sterile conditions after reconstitution.</li> </ul> |

**DATA**



**BACKGROUND**

5T4, also known as Trophoblast glycoprotein and Wnt-activated inhibitory factor 1 (WAIF1), is a single-pass transmembrane protein which may function as an inhibitor of Wnt/beta-catenin signaling (1). Distinct regions on the 5T4 ectodomain which contains eight leucine-rich repeats are thought to antagonize Wnt signaling (2). 5T4 has limited expression in normal adult tissues and in some solid tumors, while expression is elevated in human carcinomas which have been correlated with poor survival and prognosis (3-5). Cynomolgus 5T4 is a 420 amino acid (aa) protein that includes a 34 aa signal peptide, a 321 aa extracellular domain (ECD), a 21 aa transmembrane segment, and a 44 aa cytoplasmic tail. Within the ECD, cynomolgus 5T4 shares 95% and 78% aa sequence identity with human and mouse 5T4, respectively. It has been identified that TIP-2/GIPC, a common interacting protein involved in cancer, interacts with 5T4 through its PDZ domain (6). 5T4 inhibits Wnt/  $\beta$ -catenin signaling by binding to LRP6 and inhibit Wnt-induced LRP6 internalization into endocytic vesicles (1). Conversely, 5T4 can activate noncanonical Wnt signaling through DKK1 (1). In addition to LRP6, in-house data indicates 5T4 can also interact with Frizzled-8.

**References:**

1. Kagermeier-Schenk, B. *et al.* (2011) *Dev. Cell.* **21**:1129.
2. Zhao, Y. *et al.* (2014) *Structure.* **22**:612.
3. Starzynska, T. *et al.* (1994) *Br. J. Cancer.* **69**:899.
4. Naganuma, H. *et al.* (2002) *Anticancer Res.* **22**:1033.
5. Harris, J.L. *et al.* (2018) *Int. J. Biochem. Cell Biol.* **99**:28.
6. Awan, A. *et al.* (2002) *BBRC* **290**:1030.