

## DESCRIPTION

**Source** Mouse myeloma cell line, NS0-derived mouse FLRT2 protein  
Cys36-Ser539, with a C-terminal 6-His tag  
Accession # Q8BLU0.1

**N-terminal Sequence Analysis** Cys36

**Predicted Molecular Mass** 57 kDa

## SPECIFICATIONS

**SDS-PAGE** 71-80 kDa, under reducing conditions

**Activity** Measured by the ability of the immobilized protein to support the adhesion of Neuro-2A mouse neuroblastoma cells.  
The ED<sub>50</sub> for this effect is 0.60-4.80 µg/mL.

**Endotoxin Level** <0.10 EU per 1 µg of the protein by the LAL method.

**Purity** >95%, by SDS-PAGE visualized with Silver Staining and quantitative densitometry by Coomassie® Blue Staining.

**Formulation** Lyophilized from a 0.2 µm filtered solution in PBS. See Certificate of Analysis for details.

## PREPARATION AND STORAGE

**Reconstitution** Reconstitute at 500 µg/mL in PBS.

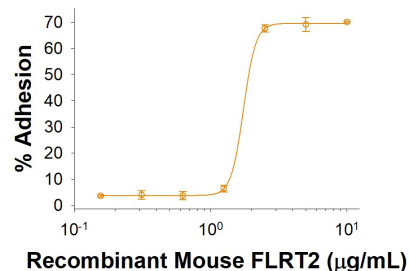
**Shipping** The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.

**Stability & Storage** Use a manual defrost freezer and avoid repeated freeze-thaw cycles.

- 12 months from date of receipt, -20 to -70 °C as supplied.
- 1 month, 2 to 8 °C under sterile conditions after reconstitution.
- 3 months, -20 to -70 °C under sterile conditions after reconstitution.

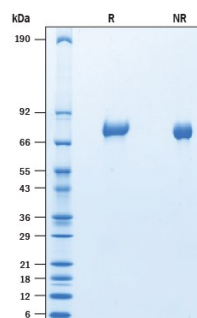
## DATA

### Bioactivity



**Recombinant Mouse FLRT2 His-tag Protein Bioactivity.** Recombinant Mouse FLRT2 His-tag (Catalog # 10715-FL) supports the adhesion of Neuro 2A mouse neuroblastoma cells. The ED<sub>50</sub> for this effect is 0.60-4.80 µg/mL.

### SDS-PAGE



**Recombinant Mouse FLRT2 His-tag Protein SDS-PAGE.** 2 µg/lane of Recombinant Mouse FLRT2 His-tag (Catalog # 10715-FL) was resolved with SDS-PAGE under reducing (R) and non-reducing (NR) conditions and visualized by Coomassie® Blue staining, showing bands at 71-80 kDa.

## BACKGROUND

FLRT2 is one of three FLRT (fibronectin, leucine rich repeat, transmembrane) glycoproteins expressed in distinct areas of the developing brain and other tissues (1, 2). The 85 kDa type I transmembrane (TM) mouse FLRT2 is synthesized as a 660 amino acid (aa) precursor with a 35 aa signal sequence, a 505 aa extracellular domain (ECD), a 21 aa TM segment and a 99 aa cytoplasmic region. The ECD contains 10 N-terminal leucine-rich repeats flanked by cysteine-rich areas, and a juxtamembrane fibronectin type III domain (1). The mouse FLRT2 ECD shares 97% and 99% aa sequence identity with human and rat FLRT2 ECD, respectively. The fibronectin domain of all three FLRTs can bind to FGF receptors (2). This binding is thought to regulate FGF signaling during development (2, 3). The LRR domains are responsible for both the localization of FLRTs in areas of cell contact and homotypic cell-cell association (4). This may be through direct interactions with other FLRT molecules or, as has been shown for FLRT3, by regulating internalization of adhesion molecules such as cadherins (4, 5). In adulthood, FLRT2 mRNA is most abundant in pancreas, but is also present in skeletal muscle, brain and heart (1). FLRT2 in mouse embryos shows highest expression in a subset of the sclerotome in the brain, the stomach, and posterior to the developing heart (2). This expression is distinct from that of FLRT1 and FLRT3 (2). Overexpression of FLRT2 promotes tumor suppression in colorectal and breast cancers (6, 7).

## References:

1. Lacy, S. E. *et al.* (1999) *Genomics* **62**:417.
2. Haines, B. P. *et al.* (2006) *Dev. Biol.* **297**:14.
3. Bottcher, R.T. *et al.* (2004) *Nat. Cell Biol.* **6**:38.
4. Karaulanov, E. E. *et al.* (2006) *EMBO Rep.* **7**:283.
5. Ogata, S. *et al.* (2007) *Genes Dev.* **21**:1817.
6. Guo, X. *et al.* (2020) *J. Cancer* **11**:7329.
7. Bae, H. *et al.* (2017) *Sci. Rep.* **7**:272.