

DESCRIPTION

Source Mouse myeloma cell line, NS0-derived human TMEFF2/Tomoregulin-2 protein
Arg34-Val320, with a C-terminal 10-His tag
Accession # Q9UIK5.1

N-terminal Sequence Analysis Arg34

Predicted Molecular Mass 33 kDa

SPECIFICATIONS

SDS-PAGE 55-66 kDa, under reducing conditions.

Activity Measured by its binding ability in a functional ELISA.
When Recombinant Human PDGF-AA (Catalog # 221-AA) is immobilized at 5.00 µg/mL (100 µL/well), Recombinant Human TMEFF2/Tomoregulin-2 His-tag Protein binds with an ED₅₀ of 0.750-4.50 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 with Trehalose. See Certificate of Analysis for details.

PREPARATION AND STORAGE

Reconstitution Reconstitute at 500 µg/mL in PBS.

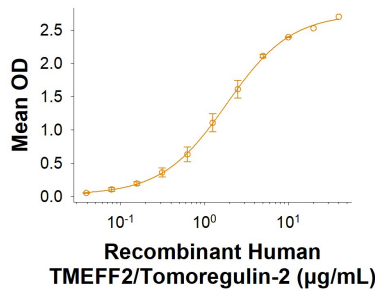
Shipping The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.

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.

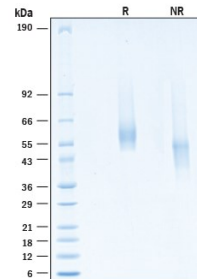
DATA

Binding Activity



Recombinant Human TMEFF2/Tomoregulin-2 His-tag Protein Binding Activity.
When Recombinant Human PDGF-AA (Catalog # 221-AA) is immobilized at 5.00 µg/mL (100 µL/well), Recombinant Human TMEFF2/Tomoregulin-2 His-tag Protein (Catalog # 11107-TF) binds with an ED₅₀ of 0.750-4.50 µg/mL.

SDS-PAGE



Recombinant Human TMEFF2/Tomoregulin-2 His-tag Protein SDS-PAGE. 2 µg/lane of Recombinant Human TMEFF2/Tomoregulin-2 His-tag Protein (Catalog # 11107-TF) was resolved with SDS-PAGE under reducing (R) and non-reducing (NR) conditions and visualized by Coomassie® Blue staining, showing bands at 55-66 kDa.

BACKGROUND

TMEFF2 (transmembrane protein with an EGF-like and two Follistatin-like domains 2), also known as Tomoregulin-2, is a type I transmembrane glycoprotein that contains two extracellular follistatin modules, an extracellular EGF-like domain, a transmembrane domain, and a short conserved cytoplasmic tail (1) Soluble extracellular domains of both TMEFF1 and 2 can be generated by proteolytic cleavage. TMEFF2 amino acid (aa) sequences are 98.9% identical for human and mouse orthologs (1). The differential methylation of TMEFF2 can be related to the response to therapy and survival outcomes of the stages of cancers such as breast, prostate, lung, bladder, colon and rectal, gallbladder, renal, oesophageal, cardiac, stomach/gastric, ovarian, multiple myeloma, glioblastoma, and mesothelioma. The range of tissue expression of TMEFF2 functions as a possible biomarker and/or therapeutic target (1). Studies showed that TMEFF2 binds and inhibits PDGF-AA (2, 3). It also inhibits the proliferation of DU145 and PC3 prostate cancer cell lines (4). The amyloid-b protein, its precursor AbPP, and amyloid- b proteins AbPOs also bind TMEFF2, suggesting a neuroprotective role on Alzheimer's disease (5). TMEFF2's diverse function includes metabolism, embryonic development, cytoskeletal binding, extracellular matrix binding, chromatin binding and interaction of RNA polymerase II with DNA (6), and neuronal development (7).

References:

1. Masood, M. *et al.* (2020) *Cancers* **12**:3862.
2. Lin, K. *et al.* (2011) *PLoS ONE* **6**:e18608.
3. Huang, H. *et al.* (2017) *Sci. Rep.* **7**:337.
4. Gery, S. *et al.* (2002) *Oncogene* **21**:4739.
5. Hong, H.S. *et al.* (2015) *Alzheimers Dis.* **48**:731.
6. Gao, L. *et al.* (2020) *Life Sci.* **243**:116910.
7. Horie, M. *et al.* (2000) *Genomics* **67**:146.