# **PRODUCT INFORMATION**

Expression system HEK293

**Domain** 23-150aa

**UniProt No.** Q96BF3

NCBI Accession No. NP\_653216.2

### **Alternative Names**

TMIGD2, Transmembrane and immunoglobulin domain-containing protein 2 isoform1, CD28 homolog, CD28H, Immunoglobulin and proline-rich receptor 1, IGPR-1, IGPR1

# **PRODUCT SPECIFICATION**

## **Molecular Weight**

40.1kDa (361aa)

#### Concentration

1mg/ml (determined by Absorbance at 280nm)

#### Formulation

Liquid in. Phosphate-Buffered Saline (pH 7.4) containing 10% glycerol

**Purity** 95% by SDS - PAGE

#### **Endotoxin level**

<1 EU per 1ug of protein (determined by LAL method)

#### **Biological Activity**

Measured by its binding ability in a functional ELISA with Human HHLA2. The ED50 range  $\leq$  200 ng/ml.

**Tag** hlgG-Tag

**Application** SDS-PAGE, Bioactivity

#### **Storage Condition**

Can be stored at +2C to +8C for 1 week. For long term storage, aliquot and store at -20C to -80C. Avoid repeated freezing and thawing cycles.

## BACKGROUND



### Description

TMIGD2, also known as IGPR-1, is a member of the Immunoglobulin family. This protein shares approximately 10% amino acid sequence identity with CD28, CTLA-4, ICOS, and PD-1. The immunoglobulin domain of TMIGD2 was predicted to be Ig V fold and was found to be highly similar to the Ig domain of myelin-associated glycoprotein. It plays a role in cell-cell interaction, cell migration, and angiogenesis. Through interaction with HHLA2, co-stimulates T-cells in the context of TCR-mediated activation. Enhances T-cell proliferation and cytokine production via an AKT-dependent signaling cascade. It is constitutively expressed on naive T and NK cells. Similar to the interaction of B7 with CD28, the interaction of TMIGD2 with B7-H7 activates the Akt-dependent signaling cascade and promotes the proliferation and activation of newly generated peripheral effector and memory T cells. Also, it interacts with multiple cytoskeletal proteins. Recombinant human TMIGD2, fused to hIgG-tag at C-terminus, was expressed in HEK293 cell and purified by using conventional chromatography techniques.

### Amino acid Sequence

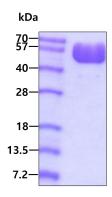
LSVQQGPNLL QVRQGSQATL VCQVDQATAW ERLRVKWTKD GAILCQPYIT NGSLSLGVCG PQGRLSWQAP SHLTLQLDPV SLNHSGAYVC WAAVEIPELE EAEGNITRLF VDPDDPTQNR NRIASFPG<LE PKSCDKTHTC PPCPAPELLG GPSVFLFPPK PKDTLMISRT PEVTCVVVDV SHEDPEVKFN WYVDGVEVHN AKTKPREEQY NSTYRVVSVL TVLHQDWLNG KEYKCKVSNK ALPAPIEKTI SKAKGQPREP QVYTLPPSRD ELTKNQVSLT CLVKGFYPSD IAVEWESNGQ PENNYKTTPP VLDSDGSFFL YSKLTVDKSR WQQGNVFSCS VMHEALHNHY TQKSLSLSPGK>

#### **General References**

Rahimi N, et al. (2012) Mol. Biol. Cell 23:1646-1656. Parry, R.V. et al. (2003) J.Immunol. 171:166-174.

## DATA

#### SDS-PAGE



**Biological Activity** 

3ug by SDS-PAGE under reducing condition and visualized by coomassie blue stain

NKMAXBIO We support you, we believe in your research Recombinant human TMIGD2/CD28H protein

Catalog Number: ATGP4142

Human TMIGD2 (ng/ml)

**U00** 10<sup>2</sup> 10<sup>1</sup> 10<sup>9</sup> 10<sup>1</sup> 10<sup>2</sup> 10<sup>3</sup> 10<sup>4</sup> 10<sup>5</sup> 10<sup>6</sup> Human HHLA2 is coated at 2 ug/ml (100 ul/well) can bind HumanTMIGD2/CD28H. The ED50 range  $\leq$  200 ng/ml.