Recombinant human TMIGD2/CD28H protein

Catalog Number: ATGP4142

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 ≤ 200 ng/ml.

Tag
hIgG-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

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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

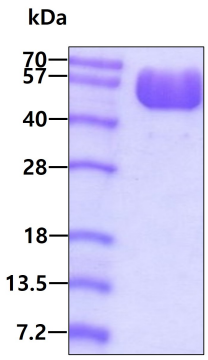
LSVQQGPNLL QVRQGSQATL VCQVDQATAW ERLRVKWTKD GAILCQPYIT NGSLSLGVCG PQGRLSWQAP SHLTLQLDPV SLNHSGAYVC WAAVEIPELE EAEGNITRLF VDPDDPTQNR NRIASFPG<LE PKSCDKTHTC PPCPAPELLG GPSVFLFPPK PKDTLMISRT PEVTCVVVDV SHEDPEVKFN WYVDGVEVHN AKTKPREEQY NSTYRVVSVL TVLHQDWLNG KEYKCKVSNK ALPAPIEKTI SKAKGQPREP QVYTLPPSRD ELTKNQVSLT 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



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

Biological Activity

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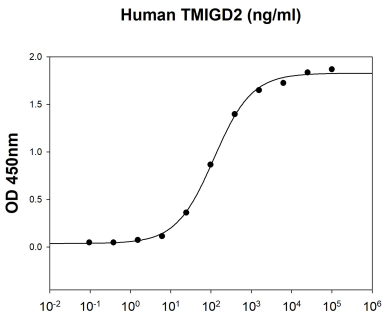

Human HHLA2 is coated at 2 ug/ml (100 ul/well) can bind HumanTMIGD2/CD28H. The ED50 range ≤ 200 ng/ml.