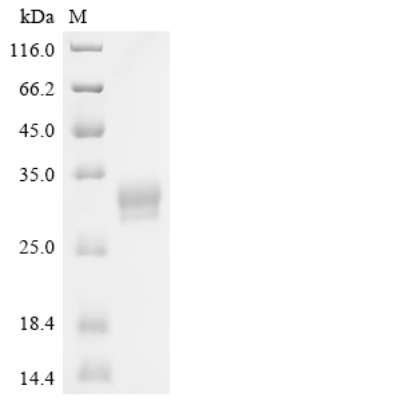
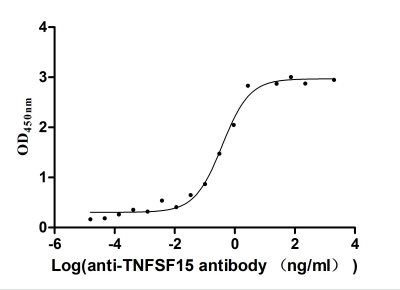
Recombinant Human Tumor necrosis factor ligand superfamily member 15(TNFSF15),partial,Biotinylated (Active)

Product Code	CSB-MP023992HU1-B
Abbreviation	Recombinant Human TNFSF15 protein, partial, Biotinylated (Active)
Storage	The shelf life is related to many factors, storage state, buffer ingredients, storage temperature and the stability of the protein itself. Generally, the shelf life of liquid form is 6 months at -20°C/-80°C. The shelf life of lyophilized form is 12 months at -20°C/-80°C.
Uniprot No.	O95150
Form	Lyophilized powder
Storage Buffer	Lyophilized from a 0.2 μm filtered PBS, 6% Trehalose, pH 7.4
Product Type	Recombinant Protein
Immunogen Species	Homo sapiens (Human)
Biological Activity	Measured by its binding ability in a functional ELISA. Immobilized Human TNFSF15 at 2 μg/mL on streptavidin coated plates can bind Anti-TNFSF15 antibody (CSB-RA023992MA1HU). The EC50 is 0.2732 - 0.6370 ng/mL.
Purity	Greater than 95% as determined by SDS-PAGE.
Sequence	LKGQEFAPSHQQVYAPLRADGDKPRAHLTVVRQTPTQHFKNQFPALHWEHEL GLAFTKNRMNYTNKFLLIPESGDYFIYSQVTFRGMTSECSEIRQAGRPNKPDSI TVVITKVTDSYPEPTQLLMGTKSVCEVGSNWFQPIYLGAMFSLQEGDKLMVNV SDISLVDYTKEDKTFFGAFLL
Source	Mammalian cell
Target Names	TNFSF15
Expression Region	72-251aa
Notes	Repeated freezing and thawing is not recommended. Store working aliquots at 4°C for up to one week.
Tag Info	N-terminal 10xHis-Avi-tagged
Mol. Weight	25.4 kDa
Protein Length	Partial of Isoform 1
Image	



(Tris-Glycine gel) Discontinuous SDS-PAGE (reduced) with 5% enrichment gel and 15% separation gel.



Activity
Measured by its binding ability in a functional ELISA. Immobilized Human TNFSF15 at 2 μg/ml on streptavidin coated plates can bind Anti-TNFSF15 antibody (CSB-RA023992MA1HU). The EC_{50} is 0.2732 - 0.6370 ng/mL.

Description

The recombinant human TNFSF15 protein, covering residues 72-251, is generated through plasmid expression in mammalian cells. The plasmid is formed by inserting the gene segment that codes for the 72-251aa of the human TNFSF15. The gene segment is co-expressed with the N-terminal 10xHis-Avi-tag gene. The resulting TNFSF15 protein's purity is greater than 95% as accessed by SDS-PAGE. Its endotoxin content is measured to be below 1.0 EU/μg using the LAL assay. ELISA demonstrates the TNFSF15 protein's biological functionality, with specific TNFSF15 antibody (CSB-RA023992MA1HU) binding yielding an EC_{50} range of 0.2732 to 0.6370 ng/mL.

Human TNFSF15 (TL1A or VEGI) is a member of the TNF superfamily, with a multifaceted role in immune regulation, inflammation, and angiogenesis. TNFSF15 is primarily expressed in immune cells such as macrophages and T cells, and its expression can be induced by pro-inflammatory stimuli [1][2]. This cytokine is particularly notable for its involvement in the modulation of T-helper cell responses, especially in promoting the differentiation of Th17 cells, which are crucial in various inflammatory and autoimmune conditions [1][3][4].

TNFSF15 has been shown to inhibit angiogenesis by regulating endothelial cell proliferation and survival. It achieves this by downregulating the VEGF production and promoting apoptosis in vascular endothelial cells [2][5]. This anti-angiogenic property is significant in the context of cancer, where TNFSF15 can limit tumor growth by preventing the formation of new blood vessels [2][6]. Moreover, TNFSF15 has been implicated in various pathological conditions, including inflammatory bowel disease (IBD), where it may contribute to gut inflammation and fibrosis [3][7][8].

Recent studies have also highlighted the role of TNFSF15 in immune responses

beyond inflammation. TNFSF15 has been shown to facilitate the differentiation of myeloid cells into vascular pericytes in tumors, enhancing their ability to associate with endothelial cells [9]. This suggests that TNFSF15 may have a dual role in both promoting and regulating immune responses, depending on the context [3][4]. Additionally, genetic variants of TNFSF15 have been associated with susceptibility to various diseases, including spondyloarthritis and gastric cancer, indicating its potential as a biomarker for disease risk [10][11][12].

References:

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Endotoxin	Less than 1.0 EU/ug as determined by LAL method.
Reconstitution	We recommend that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Please reconstitute protein in deionized sterile water to a concentration of 0.1-1.0 mg/mL.We recommend to add 5-50% of glycerol (final concentration) and aliquot for long-term storage at -20°C/-80°C. Our default final concentration of glycerol is 50%. Customers could use it as reference.
Shelf Life	The shelf life is related to many factors, storage state, buffer ingredients, storage temperature and the stability of the protein itself. Generally, the shelf life of liquid form is 6 months at -20°C/-80°C. The shelf life of lyophilized form is 12 months at -20°C/-80°C.