

## TGFB2 active protein

TGFB2 Protein, Human, Recombinant (ECD, His Tag)

CATALOG #  
**AAA257876**

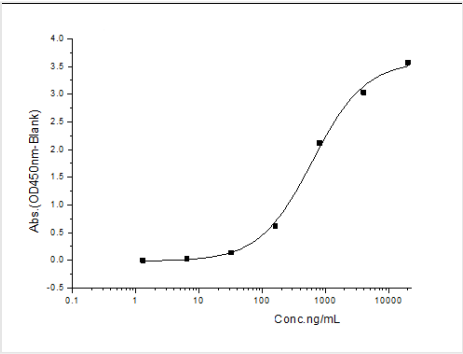
HOST  
**Baculovirus-Insect Cells**

### PRODUCT SYNONYMS

TGFB2; TGFB2 Protein; Human; Recombinant (ECD; His Tag); Human TGFB2 Protein (ECD; AAT3 Protein; FAA3 Protein; LDS1B Protein; LDS2 Protein; LDS2B Protein; MFS2 Protein; RIIC Protein; TAAD2 Protein; TGFbeta-RII Protein; TGF-2 Protein; transforming growth factor; beta receptor II (70/80kDa); TGFB2 active protein

### PRODUCT SPECIFICATIONS

|                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|-------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Host                    | Baculovirus-Insect Cells                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Purity/Purification     | >90% as determined by SDS-PAGE                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Form/Format             | Lyophilized from sterile 20mM PBS, 150mM NaCl, 10% glycerol, 0.5mM TCEP, pH7.0. Normally 5%-8% trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization. Please refer to the specific buffer information in the hard copy of CoA.                                                                                                                                                                                                                                            |
| Sequence                | Met1-Gln166                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Species                 | Human                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Endotoxin               | <1.0EU per ug protein as determined by the LAL method.                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Predicted N Terminal    | Thr 23                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Tag                     | C-His                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Protein Construction    | A DNA sequence encoding the human TGFB2 (NP_003233.4)(Met1-Gln166) was expressed with a polyhistidine tag at the C-terminus.                                                                                                                                                                                                                                                                                                                                                                             |
| Reconstitution          | A hardcopy of COA with reconstitution instruction is sent along with the products. Please refer to it for detailed information.                                                                                                                                                                                                                                                                                                                                                                          |
| Activity                | Measured by its binding ability in a functional ELISA. Immobilized TGFB2h (1-166Q) at 10ug/mL (100uL/well) can bind TGFB1-His/Biotin. The EC50 of human TGFB1-His/Biotin is 130-300ng/mL.                                                                                                                                                                                                                                                                                                                |
| Preparation and Storage | Samples are stable for up to twelve months from date of receipt at -20 degree C to -80 degree C. Store it under sterile conditions at -20 degree C to -80 degree C. It is recommended that the protein be aliquoted for optimal storage. Avoid repeated freeze-thaw cycles.<br>In general, recombinant proteins are provided as lyophilized powder which are shipped at ambient temperature. Bulk packages of recombinant proteins are provided as frozen liquid.<br>They are shipped out with blue ice. |



SDS-PAGE

**Application Data**  
Measured by its binding ability in a functional ELISA. Immobilized TGFBR2h (1-166Q) at 10 ug/mL (100 uL/well) can bind TGFβ1-His/Biotin, the EC50 of human TGFβ1-His/Biotin is 0.50-1.20 ug/mL.

ADDITIONAL INFORMATION

|                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|-------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Related Product Information for TGFBR2 active protein | Background: TGFBR2 is a member of the Ser/Thr protein kinase family and the TGFB receptor subfamily. It is a transmembrane protein. TGFBR2 is comprised of a C-terminal protein kinase domain and an N-terminal ectodomain. The ectodomain consists of a compact fold containing nine beta-strands and a single helix stabilized by a network of six intra strand disulfide bonds. The folding topology includes a central five-stranded antiparallel beta-sheet, eight-residues long at its centre, covered by a second layer consisting of two segments of two-stranded antiparallel beta-sheets. TGFBR2 has a protein kinase domain, forms a heterodimeric complex with another receptor protein, and binds TGF-beta. This receptor/ligand complex phosphorylates proteins, which then enter the nucleus and regulate the transcription of a subset of genes related to cell proliferation. Mutations in TGFBR2 gene have been associated with Marfan syndrome, Loeys-Deitz Aortic Aneurysm Syndrome, and the development of various types of tumors. TGFBR2 attenuates the biological activities of TGF-beta in colorectal cancer. TGFBR2 expression is increased in oral squamous cell carcinoma cells. Its expression is decreased by IL-1beta while inducing Sp3 via NFkappaB. TGFB2 and TGFBR2 are involved in the antiestrogenic activity. |
| References                                            | Yu Y, et al. (2012) MicroRNA-21 induces stemness by downregulating transforming growth factor beta receptor 2 (TGFbetaR2) in colon cancer cells. Carcinogenesis. 33(1):68-76. Shima K, et al. (2011) TGFBR2 and BAX mononucleotide tract mutations, microsatellite instability, and prognosis in 1072 colorectal cancers. PLoS One. 6(9):e25062. Biros E, et al. (2011) Meta-analysis of the association between single nucleotide polymorphisms in TGF-beta receptor genes and abdominal aortic aneurysm. Atherosclerosis. 219(1):218-23.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |

NCBI AND UNIPROT INFORMATION

|                                  |                                                                                                                                                                                                                                                                 |
|----------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| NCBI GI #                        | 67782324                                                                                                                                                                                                                                                        |
| NCBI GeneID                      | 7048                                                                                                                                                                                                                                                            |
| NCBI Accession #                 | NP_003233.4                                                                                                                                                                                                                                                     |
| NCBI GenBank Nucleotide #        | NM_003242.5                                                                                                                                                                                                                                                     |
| UniProt Accession #              | P37173; Q15580; Q6DKT6; Q99474; B4DTV5                                                                                                                                                                                                                          |
| Molecular Weight                 | 67,457 Da                                                                                                                                                                                                                                                       |
| NCBI Official Full Name          | TGF-beta receptor type-2 isoform B                                                                                                                                                                                                                              |
| NCBI Official Synonym Full Names | transforming growth factor, beta receptor II (70/80kDa)                                                                                                                                                                                                         |
| NCBI Official Symbol             | TGFBR2                                                                                                                                                                                                                                                          |
| NCBI Official Synonym Symbols    | AAT3; FAA3; LDS2; MFS2; RIIC; LDS1B; LDS2B; TAAD2; TGFR-2; TGFbeta-RII                                                                                                                                                                                          |
| NCBI Protein Information         | TGF-beta receptor type-2; tbetaR-II; TGF-beta type II receptor; TGF-beta receptor type IIB; transforming growth factor beta receptor type IIC; transforming growth factor, beta receptor II beta; transforming growth factor, beta receptor II alpha; transform |

|                            |                                              |
|----------------------------|----------------------------------------------|
| UniProt Protein Name       | TGF-beta receptor type-2                     |
| UniProt Gene Name          | <b>TGFBR2</b>                                |
| UniProt Synonym Gene Names | TGFR-2; TGF-beta receptor type II; TbetaR-II |
| UniProt Entry Name         | TGFR2_HUMAN                                  |

**For Research Use Only.** Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

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Online datasheet: <https://www.aaabiotech.com/baculovirus-insect-cells-active-protein/tgfr2/257876>