

DR5/TRAIL R2 Protein, Human, Recombinant (His & Avi), Biotinylated

General Information

Synonyms:	TRICK2A;DR5;tumor necrosis factor receptor superfamily, member 10b;ZTNFR9;TRICK2;TRICKB;KILLER/DR5;TRAIL-R2;CD262;KILLER;TRICK2B;TRAILR2
Protein Construction:	A DNA sequence encoding the Human TNFRSF10B (NP_003833.4) (Met1-Glu182) was expressed with a C-terminal polyhistidine tag followed by an AVI tag. The expressed protein was biotinylated in vivo by the Biotin-Protein ligase (BirA enzyme) which is co-expressed. Predicted N terminal: Ile 56
Species:	Human
Expression Host:	HEK293 Cells
Accession:	NP_003833.4
Molecular Weight:	17.54 kDa (predicted); 21.65 kDa (reducing conditions)

QC Testing

Biological Activity:	1.Loaded Biotinylated Recombinant Human DR5/TRAIL R2 Protein, His & Avi Tag (Cat#TMPY-06835) on SA Biosensor, can bind Recombinant Human TRAIL/TNFSF10 Protein with an affinity constant of 12.200 pM as determined in BLI assay (Sartorius Octet RED384) (Routinely tested). 2.Immobilized Recombinant Human TNFSF10/TRAIL/APO-2L/CD253 Protein at 2 µg/mL (100 µL/well) can bind Recombinant Human DR5/TRAIL R2 Protein (His & Avi Tag), Biotinylated (Cat#TMPY-06835), the EC50 is 0.5-2.0 ng/mL(QC tested).
Purity:	≥ 95 % as determined by SDS-PAGE. ≥ 95 % as determined by SEC-HPLC.
Endotoxin:	< 1.0 EU/µg of the protein as determined by the LAL method.
Formulation:	Lyophilized from a solution filtered through a 0.22 µm filter, containing PBS, pH 7.4. Typically, a mixture containing 5% to 8% trehalose, mannitol, and 0.01% Tween 80 is incorporated as a protective agent before lyophilization.

Preparation and Storage

Reconstitution:

A Certificate of Analysis (CoA) containing reconstitution instructions is included with the products. Please refer to the CoA for detailed information.

Stability & Storage:

It is recommended to store recombinant proteins at -20°C to -80°C for future use. Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

Shipping:

In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

Protein Background

Tumor necrosis factor receptor superfamily, member 10b, official symbol TNFRSF10B, also known as Death receptor 5, CD262, TNF-related apoptosis-inducing ligand receptor 2 (TRAIL R2), is a member of the TNF-receptor superfamily, and contains an intracellular death domain. This receptor can be activated by tumor necrosis factor-related apoptosis inducing ligand (TNFSF10/TRAIL/APO-2L), and transduces an apoptosis signal. Studies with FADD-deficient mice suggested that FADD, a death domain containing adaptor protein, is required for the apoptosis mediated by this protein. TRAIL R2/CD262/TNFRSF10B was purified independently as the only receptor for TRAIL detectable on the surface of two different human cell lines that undergo apoptosis upon stimulation with TRAIL. TRAIL R2/CD262/TNFRSF10B contains two extracellular cysteine-rich repeats, typical for TNF receptor (TNFR) family members, and a cytoplasmic death domain. TRAIL R2/CD262/TNFRSF10B mediates apoptosis via the intracellular adaptor molecule FADD/MORT1. TRAIL receptors can signal both death and gene transcription, functions reminiscent of those of TNFR1 and TRAMP, two other members of the death receptor family. Defects in TRAIL R2/CD262/TNFRSF10B may be a cause of head and neck squamous cell carcinomas (HNSCC) also known as squamous cell carcinoma of the head and neck. Cancer Immunotherapy Immune Checkpoint Immunotherapy Targeted Therapy

Reference

- Schneider P, et al. (1997) TRAIL receptors 1 (DR4) and 2 (DR5) signal FADD-dependent apoptosis and activate NF-kappaB. *Immunity*. 7(6): 831-6.
- Ichikawa K, et al. (2003) TRAIL-R2 (DR5) mediates apoptosis of synovial fibroblasts in rheumatoid arthritis. *J Immunol*. 171(2): 1061-9.
- Walczak H, et al. (1997) TRAIL-R2: a novel apoptosis-mediating receptor for TRAIL. *EMBO J*. 16(17): 5386-97.

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