

DcR2/TRAIL R4 Protein, Human, Recombinant (His)

General Information

Synonyms:	CD264;TRAILR4;tumor necrosis factor receptor superfamily, member 10d, decoy with truncated death domain;DCR2;TRUNDD;TRAIL-R4
Protein Construction:	A DNA sequence encoding the human TNFRSF10D (NP_003831.2) extracellular domain (Met 1-His 211) was fused with a polyhistidine tag at the C-terminus. Predicted N terminal: Ala 56
Species:	Human
Expression Host:	HEK293 Cells
Accession:	Q9UBN6
Molecular Weight:	18.4 kDa (predicted); 30-40 kDa (reducing condition, due to glycosylation)

QC Testing

Biological Activity:	Measured by its binding ability in a functional ELISA. Immobilized human TNFRSF10D at 10 µg/ml (100 µl/well) can bind biotinylated TNFSF10 with a linear range of 0.625-40 ng/ml.
Purity:	> 90 % as determined by SDS-PAGE
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 10D (TNFRSF10D), also known as TNF-related apoptosis-inducing ligand receptor 4 (TRAIL R4), CD264, and Decoy receptor 2, is a member of the TNF-receptor superfamily. This receptor contains an extracellular TRAIL-binding domain, a transmembrane domain, and a truncated cytoplasmic death domain. This receptor does not induce apoptosis, and has been shown to play an inhibitory role

in TRAIL-induced cell apoptosis. TRAIL R4/CD264/TNFRSF10D is widely expressed, in particular in fetal kidney, lung and liver, and in adult testis and liver. TRAIL R4/CD264/TNFRSF10D is also expressed in peripheral blood leukocytes, colon and small intestine, ovary, prostate, thymus, spleen, pancreas, kidney, lung, placenta and heart. The signaling capacity of TRAIL R4 is similar to that of TRAIL R1 and TRAIL R2 with respect to NF- κ B activation, but differs in its inability to induce apoptosis. TRAIL R4 retains a C-terminal element containing one third of a consensus death domain motif. Transient overexpression of TRAIL R4 in cells normally sensitive to TRAIL-mediated killing confers complete protection, suggesting that one function of TRAIL R4 may be inhibition of TRAIL cytotoxicity.

Reference

Degli-Esposti MA, et al. (1997) The novel receptor TRAIL-R4 induces NF-kappaB and protects against TRAIL-mediated apoptosis, yet retains an incomplete death domain. *Immunity*. 7(6): 813-20.

Meng RD, et al. (2000) The TRAIL decoy receptor TRUNDD (DcR2, TRAIL-R4) is induced by adenovirus-p53 overexpression and can delay TRAIL-, p53-, and KILLER/DR5-dependent colon cancer apoptosis. *Mol Ther*. 1(2): 130-44.

Bouralexis S, et al. (2003) Progressive resistance of BTK-143 osteosarcoma cells to Apo2L/TRAIL-induced apoptosis is mediated by acquisition of DcR2/TRAIL-R4 expression: resensitisation with chemotherapy. *Br J Cancer*. 89(1): 206-14.

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