

## TROY Protein, Human, Recombinant (hFc)

### General Information

Synonyms:	TRADE;TAJ;TNFRSF19;TAJ-alpha;TROY;TAJ- $\alpha$ ;tumor necrosis factor receptor superfamily, member 19
Protein Construction:	A DNA sequence encoding the human TNFRSF19 (Q9NS68-2) (Met1-Leu170) was expressed, fused with the Fc region of human IgG1 at the C-terminus. Predicted N terminal: Glu 30
Species:	Human
Expression Host:	HEK293 Cells
Accession:	Q9NS68-2
Molecular Weight:	42.5 kDa (predicted); 52-57 kDa (reducing conditions)

### QC Testing

Biological Activity:	Activity testing is in progress. It is theoretically active, but we cannot guarantee it. If you require protein activity, we recommend choosing the eukaryotic expression version first.
Purity:	> 85 % as determined by SDS-PAGE
Endotoxin:	< 1.0 EU/ $\mu$ g of the protein as determined by the LAL method.
Formulation:	Lyophilized from a solution filtered through a 0.22 $\mu$ m 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.
Shipping:	In general, Lyophilized powders are shipping with blue ice.

### Protein Background

Tumor necrosis factor receptor superfamily, member 19 (TNFRSF19), also known as TAJ-alpha or TROY, is a member of the TNF-receptor superfamily. TNFRSF19/TROY expression is detected in the pulmonary epithelium and the ductal epithelium of the prostate and parotid glands. TNFRSF19/TROY expression is detected in some adenocarcinoma cell lines that arise from this tissue. It has been shown to interact with TRAF family members, and to activate JNK signaling pathway when overexpressed in cells. TNFRSF19/TROY is capable of inducing apoptosis

by a caspase-independent mechanism, and it is thought to play an essential role in embryonic development. TNFRSF19/TROY was negatively regulated by adipogenic transcription factor CCAAT/enhancer-binding proteins (C/EBP). TNFRSF19 signals activation of the Jnk pathway and induces cell death. Overexpression of TNFRSF19 also signals NF $\kappa$ B activation, comparable and similar to that by p75<sup>NGFR</sup>. TNFRSF19/TROY is capable of activating key signaling pathways of the TNF receptor family, and its predominant expression patterns suggest that it plays a role in the growth and regulation of epithelial tissues.

### Reference

Hu S, et al. (1999) Characterization of TNFRSF19, a novel member of the tumor necrosis factor receptor superfamily. *Genomics*. 62(1): 103-7.

Qiu W, et al. (2010) Tumor necrosis factor receptor superfamily member 19 (TNFRSF19) regulates differentiation fate of human mesenchymal (stromal) stem cells through canonical Wnt signaling and C/EBP. *J Biol Chem*. 285 (19): 14438-49.

Hisaoka T, et al. (2006) Characterization of TROY/TNFRSF19/TAJ-expressing cells in the adult mouse forebrain. *Brain Res*. 1110(1): 81-94.

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