Recombinant Human FASL (TNFSF6) (carrier-free)

Catalog# / Size	589402 / 10 µg 589404 / 25 µg 589406 / 100 µg
Regulatory Status	RUO
Other Names	Tumor necrosis factor ligand superfamily, member 6 (TNFSF6), Apoptosis Antigen Ligand 1 (APT1LG1), apoptosis antigen Ligand, CD95 ligand (CD95L), Apo-1 ligand, CD178, Fas ligand
Description	FASL was initially cloned and purified from a cytotoxic T cell hybridoma, PC60-d10S. FASL is a type II transmembrane glycoprotein of approximately 40 kD and belongs to the TNF family of membrane-associated cytokines. A soluble fragment of FASL (sFASL, 26-29 kD) has been described using *in vitro* proteolytic assays, and MMP7 was proposed to participate in this process. Nevertheless, TIMPs (tissue inhibitors of metalloproteinases) did not alter FASL shedding. FASL is proteolytically cleaved by ADAM10, and it is the major protease responsible for FASL cleavage in murine fibroblasts and human T cells. The cleavage site is between Ser126 and Leu127. This site is outside of the self assembly (SA) domain that allows sFASL to form trimers. It has been suggested that FASL performs its biological activity as a homotrimer. Shedding of FASL modulates FASL/FAS dependent apoptosis and affects activation-induced cell death (AICD) in a superantigen stimulation model. It has published that sFASL has proapoptotic and antiapoptotic properties, depending of cell type and cell microenvironment. sFASL can be detected in the serum of patients with dysregulated inflammatory diseases. Mutations in human FAS and FASL are associated to autoimmune lymphoproliferative syndrome (ALPS). In these patients, the homeostasis of T and B lymphocytes is disturbed, leading to hepatosplenomegaly and lymphadenopathy. Dysregulation of FAS/FASL has been connected to multiple diseases such as osteoarthritis, pulmonary fibrosis, diabetic polyneuropathy, acute coronary syndrome, bladder and gastric cancer among others.

Product Details

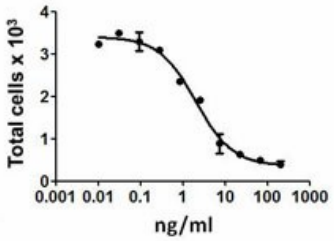
Source	Human FASL, amino acids N-Met-His8 (Pro134-Leu281) (Accession# NM_000639.1) was expressed in CHO cells.
Molecular Mass	The 157 amino acid recombinant protein has a predicted molecular mass of approximately 18 kD. The DTT-reduced and non-reduced protein migrate at approximately 29 to 30 kD by SDS-PAGE. The N-terminal amino acid is Met.
Purity	>90%, as determined by Coomassie stained SDS-PAGE.
Formulation	0.22 µm filtered protein solution is in PBS.
Endotoxin Level	Less than 0.01 ng per µg cytokine as determined by the LAL method.
Concentration	10 and 25 µg sizes are bottled at 200 µg/mL. 100 µg size and larger sizes are lot-specific and bottled at the concentration indicated on the vial. To obtain lot-specific concentration, please enter the lot number in our Concentration and Expiration Lookup or Certificate of Analysis online tools.
Storage & Handling	Unopened vial can be stored between 2°C and 8°C for up to 2 weeks, at -20°C for up to six months, or at -70°C or colder until the expiration date. For maximum results, quick spin vial prior to opening. The protein can be aliquoted and stored at -20°C or colder. Stock solutions can also be prepared at 50 - 100 µg/mL in appropriate sterile buffer, carrier protein such as 0.2 - 1% BSA or HSA can be added when preparing the stock solution. Aliquots can be stored between 2°C and 8°C for up to one week and stored at -20°C or colder for up to 3 months. **Avoid repeated freeze/thaw cycles.**
Activity	ED_{50} = 4.0 - 16 ng/ml, corresponding to a specific activity of 0.6 - 2.5 x 10^5 units/mg, as determined by the dose dependent stimulation of Jurkat death cell induced by apoptosis.
Application	Bioassay
Application Notes	BioLegend carrier-free recombinant proteins provided in liquid format are shipped on blue-ice. Our comparison testing data indicates that when handled and stored as recommended, the liquid

format has equal or better stability and shelf-life compared to commercially available lyophilized proteins after reconstitution. Our liquid proteins are verified in-house to maintain activity after shipping on blue ice and are backed by our 100% satisfaction guarantee. If you have any concerns, contact us at tech@biolegend.com.

Antigen Details

Structure	Homotrimeric
Distribution	Cytotoxic lymphocytes (CTL), NK cells, neurons, astrocytes, and T cells
Function	FASL induces apoptotic cell death. It plays a key role in the immune system homeostasis, cytotoxic T cell (CTL)-mediated killing of virally infected or transformed cells, NK cell-mediated death cell, and termination of immune responses by induction of activation-induced cell death. ADAM10 modulates FASL-mediated cell death.
Interaction	Activate T and B cells, myeloid cells, thymocytes, fibroblasts, splenocytes, hepatocytes, variety of cell types
Ligand/Receptor	FAS (CD95)
Cell Type	Embryonic Stem Cells
Biology Area	Apoptosis/Tumor Suppressors/Cell Death, Cell Biology, Immunology, Neuroscience, Stem Cells
Molecular Family	CD Molecules
Antigen References	1. Suda T, *et al.* 1993 *Cell* 75:1169. 2. Mitsiades N, *et al.* 2001 *Cancer Res.* 61:577. 3. Bodmer J, *et al.* 2002 *Trends Biochem. Sci.* 27:19. 4. Grassi F, *et al.* 2004 *Arthritis Rheum.* 50:498. 5. Bühling F, *et al.* 2005 *Respir Res* 6:37. 6. Schulte M, *et al.* 2007 *Cell Death Differ.* 14:1040. 7. Stranges PB, *et al.* 2007 *Immunity* 26:629. 8. Voss M, *et al.* 2008 Cell Commun. Signal 6:11. 9. Dowdell KC, *et al.* 2010 *Blood* 115:5164. 10. Gorbachev AV and Fairchild RL. 2010. *Eur. J. Immunol.* 40:2006.
Gene ID	356

Product Data



Apoptotic cell death induced by human FASL in Jurkat cells.

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