KillerTRAIL™ Protein (soluble) (human), (recombinant)

Enhanced ligand that utilizes the proprietary *Killer*™ linker peptide that promotes stability.

*Killer*TRAIL™ (soluble) (human), (recombinant) is an enhanced ligand that utilizes the proprietary *Killer*™ linker peptide that promotes trimerization to form a more stable oligomer.

It has been well established that signals transmitted via TNF ligands and receptors are critical in mediating inflammation, cancer, and immunity. This has led to drug development aiming to either reduce or enhance receptor response. One limitation in this process is the inherent instability of recombinant ligands and their inability to effectively mimic the natural clustering of TNF receptors on the cell surface required for immune activation. Oligomerization of TNF ligands such as *Killer*TRAIL™ has been shown to improve stability and significantly enhance immune activation compared to recombinant ligands alone.

TNF-related apoptosis-inducing ligand (TRAIL) is a protein ligand that induces the process of cell death called apoptosis.

Citations: 71 View Online »

- Increased stability
- Enhanced immune activation

Ordering Information Order Online »

ALX-201-073-C020	20µg
ALX-201-073-3020	3x20µg

Manuals, SDS & CofA View Online »

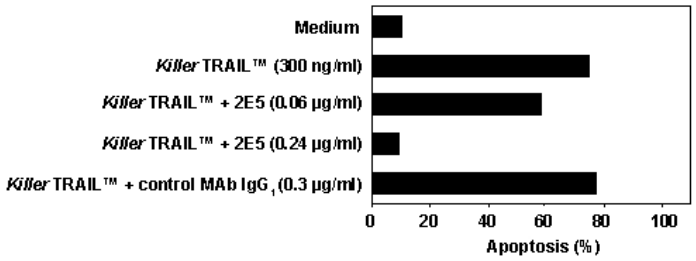


Figure: Specificity of *Killer*TRAIL™-induced apoptosis. Concentration dependent blocking of apoptosis induction of BJAB cells using MAb to TRAIL (human) (2E5) (Prod. No. ALX-804-296) reveals specificity of *Killer*TRAIL™-mediated killing.**Method:** Human BJAB cells were treated with *Killer*TRAIL™, Soluble (human) (recombinant) (at 300ng/ml) in the presence or absence of the indicated concentration of the MAb to TRAIL (human) (2E5) or a control IgG1 mouse monoclonal antibody. After 16 hours apoptosis was evaluated by forward/sideward scatter (FSC/SSC) combined with propidium iodide (PI) stain analysed by flow cytometry.””””,KillerTRAIL™ Protein (soluble) (human)

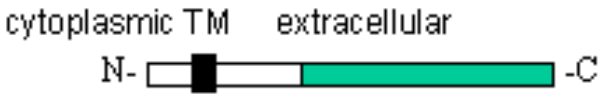


Figure: Schematic structure of human TRAIL (peptide aa 95-281).

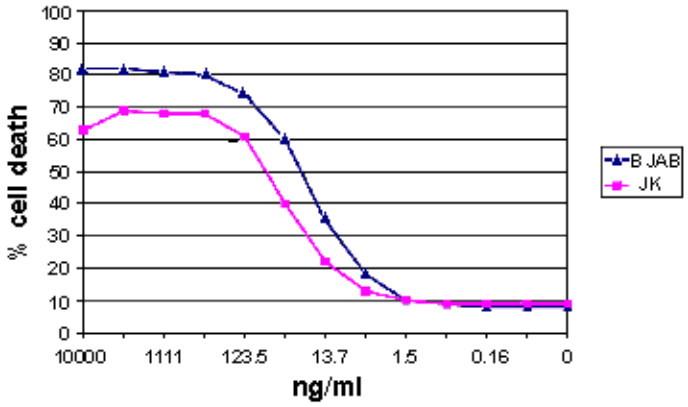


Figure: Apoptosis of TRAIL-sensitive cells. Concentration dependence of apoptosis induction in Jurkat and BJAB cells by *Killer*TRAIL™, Soluble (human) (recombinant) (Prod. No. ALX-201-073) reveals high activity even at concentrations of 10-100ng/ml.**Method:** 5×10^4 human Jurkat (JK) or BJAB cells were cultured in 100µl RPMI 1640 medium containing 10% fetal calf serum for 16 hours at 37°C in a 96-well plate in the presence of the indicated concentrations of *Killer*TRAIL™. Concentrations of *Killer* TRAIL™ required to induce apoptosis may vary depending on the cell type studied. Cell death was quantified by forward/sideward scatter (FSC/SSC) combined with propidium iodide (PI) staining analysed by flow cytometry.""",KillerTRAIL™ Protein (soluble) (human)

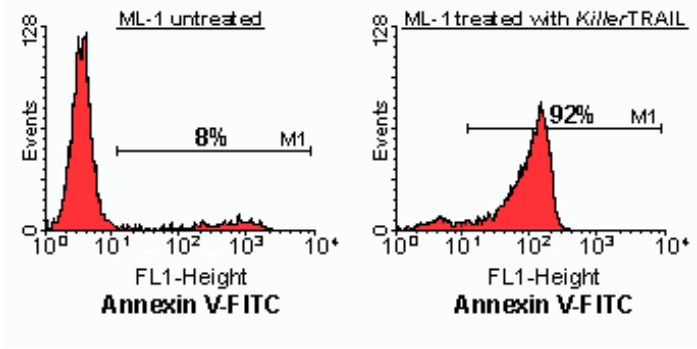


Figure: Apoptosis of TRAIL-sensitive myeloid cell line ML-1.

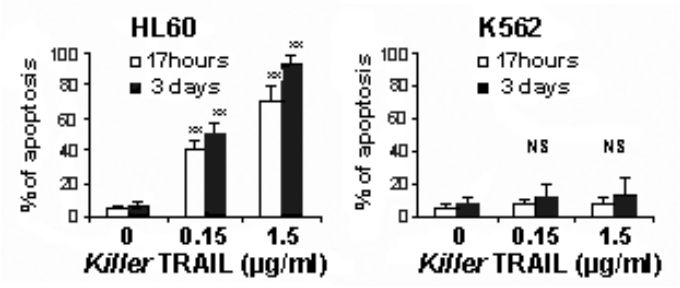


Figure: Flow cytometry analysis of the TRAIL-sensitive human leukemia cell line HL60 and of TRAIL-resistant K572 cells.

Handling & Storage

Use/Stability	Stable for at least 12 months after receipt when stored at -80° C.
Handling	Once thawed, prepare aliquots and store at -80°C (please note – to retain full activity the concentration of aliquots should be at least 0.1 mg/mL). Avoid freeze/thaw cycles. Keep vial closely capped before use, spin the tube at 5000 x g for 30 sec before use.
Long Term Storage	-80°C
Shipping	Dry Ice

Regulatory Status

RUO - Research Use Only

Product Details

Alternative Name	Apo-2L, TNFSF 10, CD253
Biological Activity	Induces apoptosis in a concentration range of 10-100ng/ml. **Note:** Does not require a cross-linking enhancer for its potent biological activity. For cell lines that require extensive cross-linking of the TRAIL-Rs for killing (e.g. Jurkat) use SUPERKILLERTRAIL® (Prod. No. ALX-201-115).
Endotoxin Content	≤0.01 EU/µg purified protein (LAL test).
Formulation	Liquid. HEPES, pH 7.4, sodium chloride, Tween 20, sucrose, azide free and 1mM DTT.
MW	~24kDa (SDS-PAGE)
Purity	≥99% (SDS-PAGE, MS analysis)
Purity Detail	Affinity purified. Sterile filtered.
Reconstitution	For a special storage and dilution buffer see KillerTRAIL™ Storage and Dilution Buffer (Prod. No. ALX-505-005).
Source	Produced in *E. coli*. The extracellular domain of human TRAIL (aa 95-281) is fused at the N-terminus to a His-tag and a linker peptide.

Specific Activity	ED_{50}: 20ng/ml (BJAB cells)
Specificity	Binds to human and mouse TRAIL receptors and osteoprotegerin (OPG).
UniProt ID	P50591

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ENZO LIFE SCIENCES, INC.
Phone: 800.942.0430
info-usa@enzolifesciences.com

European Sales Office
ENZO LIFE SCIENCES (ELS) AG
Phone: +41 61 926 8989
info-eu@enzolifesciences.com

Belgium, The Netherlands & Luxembourg
Phone: +32 3 466 0420
info-be@enzolifesciences.com

France
Phone: +33 472 440 655
info-fr@enzolifesciences.com

Germany
Phone: +49 7621 5500 526
info-de@enzolifesciences.com

UK & Ireland
Phone (UK customers): 0845 601 1488
Phone: +44 1392 825900
info-uk@enzolifesciences.com

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