Recombinant Human 4-1BB Ligand

Recombinant Proteins - CD137L / TNFSF9 co-stimulation for DC and T-cell assays.

CATALOGUE NO.	FAMILY	REVISION	EFFECTIVE
GMP-TL695-0050	**Recombinant Proteins**	**2.1**	**01 Oct 2026**

DESCRIPTION

A TNF superfamily member expressed on activated antigen-presenting cells. 4-1BBL provides costimulation that sustains $CD8^+$ T-cell responses and DC maturation.

ORDERING INFORMATION

Pack size	Order code	List price (USD)	Lead time
50 µg	GMP-TL695-0050	$422	In stock
100 µg	GMP-TL695-0100	$700	In stock

List prices are for research pack sizes, excluding shipping and local duties. Process-scale quantities and GMP lots are quoted individually.

SPECIFICATIONS

Expression system	HEK293
Purity	≥ 95% (SDS-PAGE)
Endotoxin	≤ 0.1 EU/µg
Format	Lyophilised
Storage	≤ -20 °C
Shelf life	24 months

KEY FEATURES

- CD137L / TNFSF9
- DC maturation and T-cell costimulation
- Carrier-free

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continued

HANDLING AND STORAGE

Store as stated in the specification table. Do not aliquot into glass unless the surface is passivated; proteins at low concentration adsorb to glass and to some low-bind plastics. Equilibrate to room temperature before use and avoid repeated freeze-thaw cycles.

Where a lot-specific value differs from the catalogue range, the value on the Certificate of Analysis takes precedence.

WHERE IT IS USED

Catalogue applications: T Cell Therapy, Dendritic & Macrophage.

- Bench-scale process development and assay qualification
- Analytical method transfer, where the reagent is part of the readout
- Pilot and clinical manufacturing, in the GMP grade of the same design

The GMP and RUO grades share the same design and the same release panel; the grade determines the documentation package and the release criteria, not the reagent chemistry. Qualify once, then scale on the same specification.

COMPATIBILITY

Automated platforms	Validated on closed, functionally closed and open bench formats
Bead removal	Where applicable, removal is optional; residual beads do not interfere with downstream
Downstream assays	Flow cytometry, viability, expansion and cytotoxicity readouts
Container	Supplied in low-bind plastic; do not transfer to glass for storage

REVISION HISTORY

Rev	Date	Change
2.1	01 Oct 2026	Ordering table aligned to 2026 list prices; handling notes expanded
2.0	12 Mar 2025	Specification panel harmonised across GMP and RUO grades
1.0	05 Jun 2023	First release

RELATED DOCUMENTS

Certificate of Analysis	Supplied with every lot; representative copy available on request
Safety data sheet	Available for this product family
DMF	Referenceable filing where applicable - see the DMF summary
Quality overview	ISO 13485:2016 and ISO 9001 certification scope

This datasheet describes the catalogue specification. Final acceptance criteria are fixed in the lot-specific Certificate of Analysis and, for GMP material, in the quality agreement.