

B-Xpander[™]

Unleash the Power of B Cell Expansion for Clinical Research & Immunotherapies

Interest in B cells has recently increased in immunotherapies using Engineered B cells or Tumor-Infiltrating Lymphocytes (TILs). However, current methods for B cell expansion are inefficient, time consuming and can lead to insufficient B cell numbers and persistent T cell exhaustion. Our B-Xpander[™] protein improves current protocols for B cell stimulation by mimicking the natural interaction between CD40L and CD40 molecules on B cells.

B-Xpander[™] is a potent enhanced Multimeric human CD40L cytokine, for B cell activation, B cell expansion (proliferation) and cell therapy applications. In-house production using a proprietary protocol and a characterized and certified CHO cell line allows the supply of the most active Multimeric human CD40L proteins in GMP-like format.

B-Xpander[™] – B Cell Expansion (Proliferation)

B-Xpander[™] increases proliferation of human primary CD19⁺ B cells as efficiently as other grades of Multimeric human CD40L. Unlike most recombinant CD40L proteins on the market, our B-Xpander[™] and Multimeric CD40L proteins do not need an enhancer (antibody) to multimerize and to be active.

METHOD: Activity of B-Xpander[™] and 2 different research grades of Multimeric hCD40L is measured by proliferation of human primary CD19⁺ B cells. Cells (5 x 10⁴/well) are grown in RPMI medium, glutamine, 10% FBS, IL-4 (human) (10ng/ml), IL-21 (human) (10ng/ml) and different concentrations of B-Xpander[™] CD40L (human) (rec.) (Animal-Free) (#AG-40B-0010AF), CD40L (human) (multimeric) (rec.) (CSG; Certified Serum Grade) (#AG-40B-0010CSG), CD40L (human) (multimeric) (rec.) (#AG-40B-0010), or a control protein. Cell proliferation is quantified after 4 days using PMS/MTS (CellTiter 96[®] Aqueous One Solution Cell Proliferation Assay, Promega). Cells expanded by 10-fold after 4 days to reach 5 x 10⁵/well.

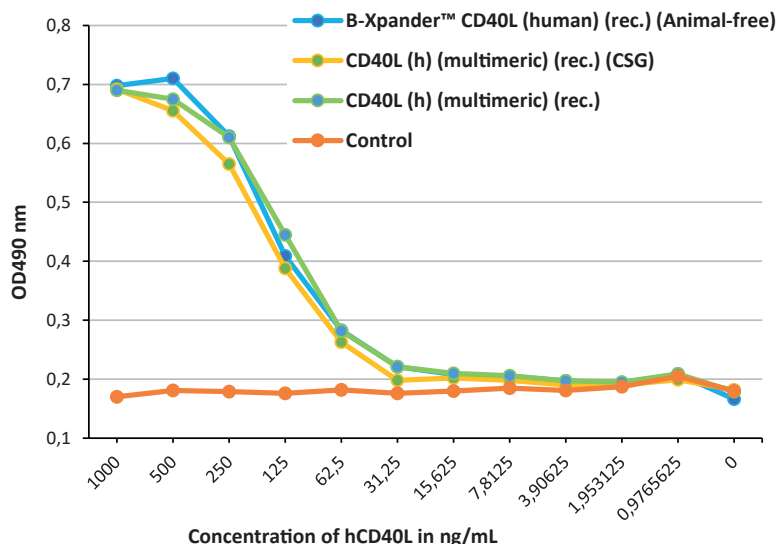


FIGURE: Measurement of B cell proliferation.

B-Xpander™ – The Power of B Cell Expansion in Adoptive Cell Therapy

Embrace the future of immunotherapy research with Multimeric human CD40L-powered B cell expansion. Backed by rigorous scientific research and development, B-Xpander™, our cutting-edge Multimeric human CD40L-based B cell expansion tool, represents a major improvement in immunotherapy. During Adoptive Cell Transfer (ACT) immunotherapy, activation and expansion of B cells present with T cells in tumor-infiltrating lymphocytes (TILs) by B-Xpander™ leads to increased proliferation and greater abilities of T cells to fight cancer cells (Arnaud, et al. 2022).

LIT: Sensitive identification of neoantigens and cognate TCRs in human solid tumors: M. Arnaud, et al.; Nat. Biotechnol. 40, 656 (2022)

B-Xpander™ and Multimeric human CD40L Grades for your experiments:

Product Name	PID	Specifications / Applications
B-Xpander™		
B-Xpander™ CD40L (human) (rec.) (Animal Free)	AG-40B-0010AF	<ul style="list-style-type: none"> Produced using animal component-free medium in characterized and certified CHO cells GMP-like production Ex vivo B Cell Expansion for Cell Therapy
B-Xpander™ CD40L (human) (rec.) (GMP-grade)	Custom Please Inquire	<ul style="list-style-type: none"> GMP-Production outsourced to CRO Ex vivo B Cell Expansion for Cell Therapy
Other Research Grades		
CD40L (human) (multimeric) (rec.)	AG-40B-0010	<ul style="list-style-type: none"> Produced using standard serum/medium in CHO cells Ex vivo B Cell Expansion for Research Use
CD40L (human) (multimeric) (rec.) (Certified Serum Grade)	AG-40B-0010CSG	<ul style="list-style-type: none"> Produced using certified serum/medium in CHO cells for traceability Ex vivo B Cell Expansion for Cell Therapy and Research Use

B-Xpander™ Quality Features:

- **Production in characterized and certified CHO cell line (for GMP-grade manufacturing)***
- **High Bioactivity tested by ELISA/Cell-based Assays**
- **Verified Purity & Homogeneity by SEC**
- **Low Endotoxin Level**
- **Batch-to-Batch Consistency**
- **Animal-component free Production**
- **No cross-linking Reagents necessary**

* Master Cell Bank Biosafety Testing and Characterization (GMP compliant): Cell growth, Sterility, Mycoplasma (Compendial Method), Cell Line Identity DNA Barcoding, Cell Profile Examination by TEM, Extended S+L Assay (Test for Infectious Murine Xenotropic Retrovirus), Transcriptomic Analysis by Next Generation Sequencing (NGS)