

## 4 1BBL Human

*4-1BB Ligand Human Recombinant*  
CYK0002

### Product Overview

Name 4 1BBL Human

#### Description

4-1BB Ligand Human Recombinant

Accession (Primary) [P41273](#)

#### Synonyms

CD137L, CD137-L, 4-1BBL, 4-1BB Ligand, TNFSF9, Tumor Necrosis Factor (ligand) Superfamily Member 9.

#### Introduction

4-1BBL is a transmembrane cytokine that is part of the tumor necrosis factor (TNF) ligand family. 4-1BBL is a bidirectional signal transducer that performs as a ligand for TNFRSF9, which is a costimulatory receptor molecule in T lymphocytes. TNFSF9 and its TNFRSF9 take part in the antigen presentation development and in the generation of cytotoxic T cells. 4-1BBR is absent from resting T lymphocytes but rapidly expressed upon antigenic stimulation. TNFSF9 reactivates anergic T lymphocytes as well as promoting T lymphocyte proliferation. 4-1BB Ligand is needed for the optimal CD8 responses in CD8 T cells. 4-1BBL is expressed in carcinoma cell lines, and is thought to be involved in T cell-tumor cell interaction. 4-1BBL is expressed by activated B cells, macrophages, dendritic cells, activated T cells, neurons and astrocytes. The interaction of 4-1BB with TNFRSF9 strongly regulates immunity and has been proposed to preferentially control T cell responses based on studies in various murin

#### Source

Escherichia Coli.

#### Physical Appearance

Sterile Filtered colorless solution.

#### Formulation

Recombinant 4-1BBL solution (1mg/ml) contains 20mM Tris-HCl buffer pH-8, 100mM NaCl and 20% glycerol.

#### Stability

Store at 4°C if entire vial will be used within 2-4 weeks. Store, frozen at -20°C for longer periods of time. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA). Avoid multiple freeze-thaw cycles.

#### Purity

Greater than 95.0% as determined by SDS-PAGE

#### Amino acid sequence

MRGSHHHHHH GMASMTGGQQ M GRDLYDDDD KDRWGSHMRE GPELSPDDPA GLLDLRQGMF AQLVAQNVLL  
IDGPLSWYSD PGLAGVSLTGGLSYKEDTKE LVVAKAGVYY VFFQLELRRV VAGEGSGSVS LALHLQPLRS  
AAGAAALALT VDLPPASSEA RNSAFGFQGR LLHLSAGQRL GVHLHTEARA RHAWQLTQGA TVLGLFRVTP  
EIPAGLPSPR SE.

#### Precautions

4 1BBL Human is for research use only and not for use in diagnostic or therapeutic procedures.

**Target Information: ( [P41273](#) )**