

Store at
-20°C

Human CD40 Ligand (hCD40L)



#32621

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Molecular Wt.	Source	Purity
16 kDa	Human Recombinant Protein expressed in <i>E. coli</i>	>95%

Background: CD40 Ligand (CD40L), a member of the TNF superfamily of ligands, is expressed as either a membrane-bound or soluble homotrimer (1). Both membrane-bound and soluble forms of CD40L have biological activity (1,2). CD40L is expressed primarily on activated T cells; however, mast cells, basophils, and NK cells may also express CD40L (1). CD40L functions as an important T cell co-stimulatory molecule and enhances T-dependent B cell responses (1,2). CD40L binds CD40, which is a receptor expressed on B cells, dendritic cells, and macrophages (1). Binding of CD40L to CD40 leads to the recruitment of TRAF proteins (TRAFs 2,3,5, and 6) resulting in the activation of the JNK and NF- κ B pathways (1,2).

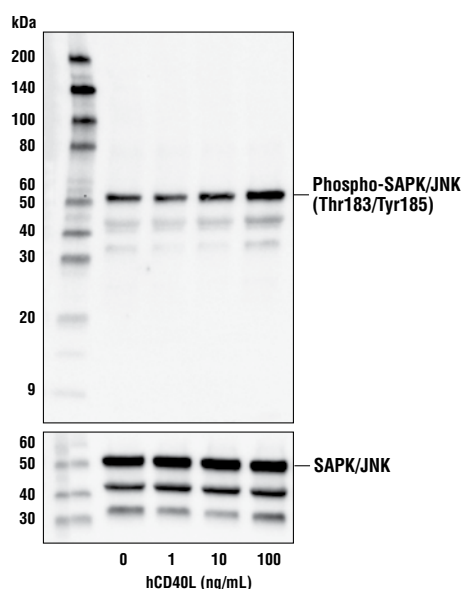
Background References:

- (1) van Kooten, C. and Banchereau, J. (2000) *J Leukoc Biol* 67, 2-17.
 (2) Peters, A.L. et al. (2009) *Semin Immunol* 21, 293-300.

Source/Purification: Recombinant human CD40L was expressed in *E. coli* and is supplied in a lyophilized form. A greater than 95% purity was determined by SDS-PAGE. Endotoxin levels are less than or equal to 1 EU / 1 μ g hCD40L.

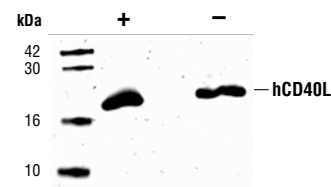
Directions For Use: Working concentration of hCD40L generally ranges from 1-100 ng/ml.

Activity: The bioactivity of recombinant hCD40L was determined by measuring the secreted embryonic alkaline phosphatase (SEAP) activity in HEK-blue™ CD40L responsive indicator cells. The ED50 of each lot is between 5-50 ng/ml.

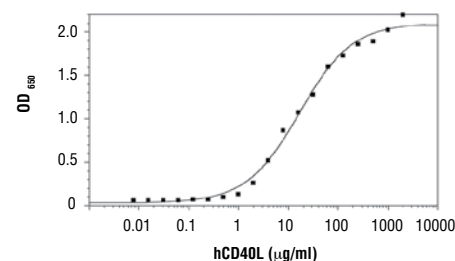


Western blot analysis of extracts from THP-1 cells, untreated or treated with hCD40L for 15 minutes, using Phospho-SAPK/JNK (Thr183/Tyr185) (81E11) Rabbit mAb #4668 (upper) and SAPK/JNK Antibody #9252 (lower).

Storage: Recombinant human CD40L is supplied as lyophilized material that is very stable at -20°C. It is recommended to reconstitute with sterile water at a concentration of 0.1 mg/ml, which can be further diluted in aqueous solutions as needed. Addition of a carrier protein (0.1% HSA or BSA) is recommended for long term storage.



The purity of recombinant hCD40L was determined by SDS-PAGE of 1.5 μ g reduced (+) and non-reduced (-) recombinant hCD40L and staining overnight with Coomassie Blue.



HEK-blue™ CD40L responsive indicator cells were cultured with 0 to 2 μ g/ml of hCD40L. Secreted embryonic alkaline phosphatase (SEAP) activity was assessed by measuring OD₆₅₀.

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Applications: W—Western IP—Immunoprecipitation IHC—Immunohistochemistry ChIP—Chromatin Immunoprecipitation IF—Immunofluorescence F—Flow cytometry E-P—ELISA-Peptide Species Cross-Reactivity: H—human M—mouse R—rat Hm—hamster Mk—monkey Mi—mink C—chicken Dm—D. melanogaster X—Xenopus Z—zebrafish B—bovine Dg—dog Pg—pig Sc—S. cerevisiae Ce—C. elegans Hr—Horse All—all species expected Species enclosed in parentheses are predicted to react based on 100% homology.