CD47 Cell Lysate – Tissue Lysate

PRODUCT OVERVIEW

Product Name	CD47, Cell Lysate
Full Product Name	Human CD47 HEK293 Overexpression Lysate
Product Gene Name	CD47 cell lysate
Product Synonym Names	Human CD47 HEK293 Cell Lysate (WB positive control); CD47 molecule; Human IAP Overexpression Lysate; Human MER6 Overexpression Lysate; Human OA3 Overexpression Lysate
Sequence	Met1-Pro13 9
Host	HEK293 Cells
Form/Format	1x Sample Buffer (1x modified RIPA buffer+1x SDS loading buffer). Modified RIPA Lysis Buffer: 50 mM Tris-HCl pH 7.4, 150 mM NaCl, 1mM EDTA, 1% Triton X-100, 0.1% SDS, 1% Sodium deoxycholate, 1mM PMSF.
Preparation and Storage	Store at 4 degree C for up to twelve months from date of receipt. After re-dissolution, aliquot and store at -80 degree C for up to twelve months. Avoid repeated freeze-thaw cycles. Samples are stable for up to twelve months from date of receipt.
Molecular Weight	33,845 Da
Sequence Positions	132aa
Species	Human
Recommend Usage	1. Centrifuge the tube for a few seconds and ensure the pellet at the bottom of the tube.**2. Re-dissolve the pellet using 200uL pure water and boil for 2-5 min.**
Sequence Construction	A DNA sequence encoding the human CD47 (NP_942088.1) (Met1-Pro139) was expressed with a polyhistidine tag at the C-terminus.
Preparation Method	Cell lysate was prepared by homogenization of the over-expressed cells in ice-cold modified RIPA Lysis Buffer with cocktail of protease inhibitors. Cell debris was removed by centrifugation. Protein concentration was determined by Bradford assay (protein assay, Microplate Standard assay). The cell lysate was boiled for 5 min in 1 x SDS loading buffer (50mM Tris-HCl pH 6.8, 12.5% glycerol, 1% sodium dodecylsulfate, 0.01% bromophenol blue) containing 5% b-mercaptoethanol, and lyophilized.
Product Categories/Family for CD47 cell lysate	Cancer Drug Targets
Applications Tested/Suitable for CD47 cell lysate	Western Blot (WB)
Application Notes for CD47 cell lysate	WB: Use at an assay dependent dilution.
Related Product Information for CD47 cell lysate	CD47 contains 1 Ig-like V-type (immunoglobulin-like) domain and is a receptor for the C-terminal cell binding domain of thrombospondin. It may play a role in membrane transport and signal transduction. CD47 is also a membrane protein, which is involved in the increase in intracellular calcium concentration that occurs upon cell adhesion to extracellular matrix. It is very broadly distributed on normal adult tissues, as well as ovarian tumors, being especially abundant in some epithelia and the brain. CD47 may play a role in membrane transport and/or integrin dependent signal transduction. It may prevent premature elimination of red blood cells. It also may be involved in membrane permeability changes induced following virus infection. By acting as an adhesion receptor for THBS1 on platelets, CD47 plays a role in both cell adhesion and in the modulation of integrins. It also plays an important role in memory formation and synaptic plasticity in the hippocampus. This Human CD47 overexpression lysate was created in HEK293 Cells and intented for use as a Western blot (WB) positive control. Purification of CD47 protein from the overexpression lysate was verified.

Product References and Citations for CD47 cell lysate	Brown EJ, et al. (2001) Integrin-associated protein (CD47) and its ligands. Trends Cell Biol. 11(3): 130-5.Oldenborg PA. (2004) Role of CD47 in erythroid cells and in autoimmunity. Leuk Lymphoma. 45(7): 1319-27.Kaczorowski DJ, et al. (2007) Targeting CD47: NO limit on therapeutic potential. Circ Res. 100(5): 602-3.
Other Notes	Small volumes of CD47 cell lysate vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.
Searchable Terms for CD47 purchase	MBS8114946 is a cell lysate targeting CD47. Also known as Human CD47 HEK293 Overexpression Lysate. Host: HEK293 Cells.

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for CD47. It may not necessarily be applicable to this product.

NCBI GI #	38683836
NCBI GeneID	961
NCBI Accession #	NP_942088.1
UniProt Secondary Accession #	Q53Y71; Q96A60; A8K198; D3DN59
UniProt Related Accession #	Q08722
GenBank Nucleotide #	NM_198793.2
NCBI Official Full Name	leukocyte surface antigen CD47 isoform 2
NCBI Official Synonym Full Names	CD47 molecule
NCBI Official Symbol	CD47
NCBI Official Synonym Symbols	IAP; OA3; MER6
Protein Family	Leukocyte surface antigen
NCBI Protein Information	leukocyte surface antigen CD47; CD47 glycoprotein; Rh-related antigen; integrin associated protein; integrin-associated protein; integrin-associated signal transducer; antigenic surface determinant protein OA3; antigen identified by monoclonal antibody 1D
NCBI Summary for CD47	This gene encodes a membrane protein, which is involved in the increase in intracellular calcium concentration that occurs upon cell adhesion to extracellular matrix. The encoded protein is also a receptor for the C-terminal cell binding domain of thrombospondin, and it may play a role in membrane transport and signal transduction. This gene has broad tissue distribution, and is reduced in expression on Rh erythrocytes. Alternatively spliced transcript variants have been found for this gene. [provided by RefSeq, Jul 2010]
Research Articles on CD47	**1.** Suppression of CD47 by morpholino approach suppressed growth of hepatocellular carcinoma in vivo and exerted a chemosensitization effect through blockade of CTSS/PAR2 signaling.
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