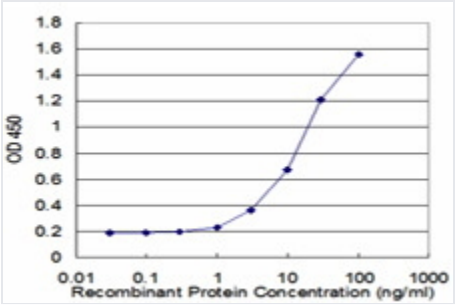
LIG4 Antibody – Mouse Monoclonal

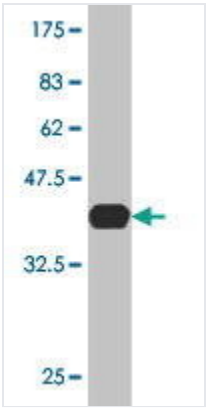
PRODUCT OVERVIEW

Product Name	LIG4, Monoclonal Antibody
Full Product Name	LIG4 (DNA Ligase 4, DNA Ligase IV, Polydeoxyribonucleotide Synthase [ATP] 4) (FITC)
Product Gene Name	anti-LIG4 antibody
Clonality	Monoclonal
Isotype	IgG2a,k
Clone Number	2D2
Host	Mouse
Species Reactivity	Human
Form/Format	Supplied as a liquid in PBS, pH 7.2. No preservative added. Labeled with Fluorescein isothiocyanate (FITC).
Purity/Purification	Purified by Protein A Affinity Chromatography.
Specificity	Recognizes human LIG4.
Preparation and Storage	Store product at 4 degree C if to be used immediately within two weeks. For long-term storage, aliquot to avoid repeated freezing and thawing and stor degree C. Aliquots are stable at -20 degree C for 12 months after receipt. Dilute required amount only prior to immediate use. Further dilutions can be r assay buffer. Caution: FITC conjugates are sensitive to light. For maximum recovery of product, centrifuge the original vial after thawing and prior to rer cap.
Molecular Weight	103,971 Da
Immunogen	Partial recombinant protein corresponding to aa802-911 from human LIG4 with GST tag. MW of the GST tag alone is 26kD.
Immunogen Sequence	RYSWDCSPLSMFRRHTVYLDSYAVINDLSTKNEGTRLAIKALELRFHGAKVVSCLAEGVSHVIIGEDHSRVADFKAFRRTFKRKFKILKESWVTDSIDKCEL
Conjugate	FITC
Product Categories/Family for anti-LIG4 antibody	Antibodies; DNA Replication; Repair
Applications Tested/Suitable for anti-LIG4 antibody	ELISA (EIA), Western Blot (WB)
Application Notes for anti-LIG4 antibody	Applications are based on unconjugated antibody.
Related Product Information for anti-LIG4 antibody	LIG4 encodes a DNA ligase that joins single-strand breaks in a double-stranded polydeoxynucleotide in an ATP-dependent reaction. This protein is ess V(D)J recombination and DNA double-strand break (DSB) repair through nonhomologous end joining (NHEJ). This protein forms a complex with the X- cross complementing protein 4 (XRCC4), and further interacts with the DNA-dependent protein kinase (DNA-PK). Both XRCC4 and DNA-PK are known required for NHEJ. The crystal structure of the complex formed by this protein and XRCC4 has been resolved. Defects in this gene are the cause of LIG syndrome.

Other Notes	Small volumes of anti-LIG4 antibody vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessa 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 may apply.
Searchable Terms for LIG4 purchase	MBS6148010 is an antibody targeting LIG4. Also known as LIG4 (DNA Ligase 4, DNA Ligase IV, Polydeoxyribonucleotide Synthase [ATP] 4) (FITC). R Human. Host: Mouse.



Testing Data of anti-LIG4 antibody
Detection limit for recombinant GST tagged LIG4 is ~1ng/ml using 129087 as a capture antibody.



Western Blot (WB) of anti-LIG4 antibody
Western Blot detection against Immunogen using 129087 (37.73kD).

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for LIG4. It may not necessarily be applicable to this product.

NCBI GI #	34190693
NCBI GeneID	3981
NCBI Accession #	BC037491
NCBI Related Accession #	AAH37491
UniProt Secondary Accession #	Q8IY66; Q8TEU5
UniProt Related Accession #	P49917
NCBI Official Full Name	Homo sapiens ligase IV, DNA, ATP-dependent, mRNA
NCBI Official Synonym Full Names	DNA ligase 4
NCBI Official Symbol	LIG4
NCBI Official Synonym Symbols	LIG4S
Protein Family	DNA ligase
NCBI Protein Information	DNA ligase 4
NCBI Summary for LIG4	The protein encoded by this gene is a DNA ligase that joins single-strand breaks in a double-stranded polydeoxynucleotide in an ATP-dependent reaction. This protein is essential for V(D)J recombination and DNA double-strand break (DSB) repair through nonhomologous end joining (NHEJ). This protein forms a complex with the X-ray repair cross complementing protein 4 (XRCC4), and further interacts with the DNA-dependent protein kinase (DNA-PK). Both XRCC4 and DNA-PK are known to be required for NHEJ. The crystal structure of the complex formed by this protein and XRCC4 has been resolved. Defects in this gene are the cause of LIG4 syndrome. Alternatively spliced transcript variants encoding the same protein have been observed. [provided by RefSeq, Jul 2008]
Research Articles on LIG4	**1.** LIG4 is highly upregulated in human colorectal cancer cells.

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