DNA Ligase 1 Monoclonal Mouse Antibody (1A9)

Product Description

DNA Ligase I maintains the major DNA Ligase activity in proliferating cells by joining Okazaki fragments during lagging strand DNA replication. Human DNA Ligase I also has an essential role in DNA repair pathways, where it catalyzes the formation of phosphodiester bonds between adjacent 5′ phosphoryl and 3′ hydroxy termini at single breaks in duplex DNA molecules. In addition, DNA Ligase I plays a role in sealing nicks during excision repair. Similar to other DNA ligases, DNA Ligase I is built around a common catalytic core. Increased levels of DNA Ligase I are found in human tumors, as compared to benign tissues, as well as in peripheral blood lymphocytes. DNA Ligase I activity is altered in the chromosomal breakage deficit Bloom's syndrome (BS). Individuals with BS either have decreased levels of abnormally thermolabile DNA Ligase I or possess a dimeric form of this enzyme. Primary antibodies are available purified, or with a selection of fluorescent CF® dyes and other labels. CF® dyes offer exceptional brightness and photostability. See the CF® Dye Brochure for more information. Note: Conjugates of blue fluorescent dyes like CF®405S and CF®405M are not recommended for detecting low abundance targets, because blue dyes have lower fluorescence and can give higher non-specific background than other dye colors. **Stock status:** Because Biotium offers a large number of antibody and conjugation options, primary antibody conjugates may be made to order. Typical lead times are up to one week for CF® dye and biotin conjugates, and up to 2-3 weeks for fluorescent protein and enzyme conjugates. Please email order@biotium.com to inquire about stock status and lead times before placing your order.

References

Note: References for this clone sold by other suppliers may be listed for expected applications.

1. PNAS USA (1987) 84:1374-1378. (Flow, IP)
2. Eur J Immunol (1990) 20: 509-515. (functional studies)
3. J Immunol (2003) 171:2496-2503. (Flow; IP; functional studies)

Product attributes

Antibody number	#2177
Antibody reactivity (target)	DNA Ligase 1
Antibody type	Primary
Host species	Mouse
Clonality	Monoclonal
Clone	1A9
Isotype	IgG1, kappa
Molecular weight	133 kDa
Synonyms	DNA ligase 1; DNA ligase I; DNLI1_HUMAN; LIG 1; lig1; Ligase I DNA ATP dependent; MGC117397; MGC130025; Polydeoxyribonucleotide synthase [ATP] 1
Human gene symbol	LIG1
Entrez gene ID	3978
SwissProt	P18858
Unigene	1770
Immunogen	Full-length native cow LIG1 protein
Antibody target cellular localization	Nucleus
Species reactivity	Bovine, Human, Mouse, Rat
Expected antibody applications	Flow, surface (published for clone), Functional studies (published for clone), IP (published for clone)
Antibody application notes	Western blot 0.5-1 ug/mL; ELISA; Immunoprecipitation; Optimal dilution for a specific application should be determined.
Positive control	MOLT-4, PC-3 or Jurkat cell lysates.
Shipping condition	Room temperature
Storage Conditions	Store at 2 to 8 °C, Protect fluorescent conjugates from light, Note: store BSA-free antibodies at -10 to -35 °C
Regulatory status	For research use only (RUO)
Antibody/conjugate formulation	Conjugates: 0.1 mg/mL in PBS/0.1% BSA/0.05% azide, HRP conjugates: 0.1 mg/mL in PBS/0.05% BSA, Purified: 0.2 mg/mL in PBS/0.05% BSA/0.05% azide, Purified, BSA-free: 1 mg/mL in PBS without azide
Shelf life	Guaranteed for at least 24 months from date of receipt when stored as recommended

Antibody # prefix	Conjugation	Ex/Em (nm)	Laser line	Detection channel	Dye Features
BNC04	CF®405S	404/431	405	DAPI (microscopy), AF405	CF®405S Features
BNC88	CF®488A	490/515	488	GFP, FITC	CF®488A Features
BNC68	CF®568	562/583	532, 561	RFP, TRITC	CF®568 Features
BNC94	CF®594	593/614	561	Texas Red®	CF®594 Features
BNC40	CF®640R	642/662	633-640	Cy®5	CF®640R Features
BNC47	CF®647	650/665	633-640	Cy®5	CF®647 Features
BNCB	Biotin	N/A	N/A	N/A	
BNUB	Purified	N/A	N/A	N/A	
BNUM	Purified, BSA-free	N/A	N/A	N/A	