

Technical Data Sheet

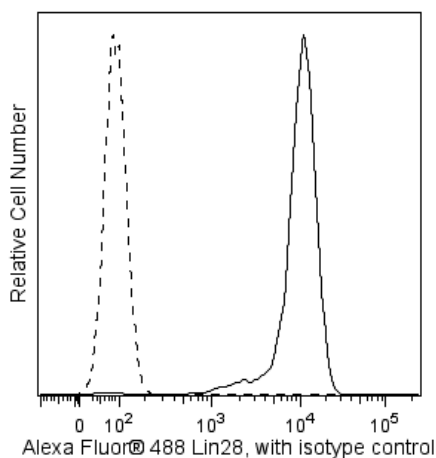
Alexa Fluor® 488 Mouse Anti-Human Lin-28

Product Information

Material Number:	563597
Alternate Name:	Lin-28A, LIN28A, CSDD1, LIN28, ZCCHC1
Size:	50 tests
Vol. per Test:	5 µl
Clone:	6D1F9
Immunogen:	Human Lin-28 Recombinant Protein
Isotype:	Mouse IgG1, κ
Reactivity:	QC Testing: Human
Storage Buffer:	Aqueous buffered solution containing BSA, protein stabilizer, and ≤0.09% sodium azide.

Description

Lin-28 is an evolutionarily conserved RNA-binding protein that is expressed in embryonic tissue, embryonic stem cells, and some adult tissues (e.g. cardiac and skeletal muscle). Within these cells, it is localized to ribosomes, P-bodies, and stress granules. During embryonic development, Lin-28 acts as a "translational enhancer" by binding to certain mRNAs and increasing their translation efficiency. Additionally, Lin-28 is overexpressed in some human cancer cell lines and is associated with the malignant transformation of cells as well as advanced human malignancies. This role is thought to be tied to the binding of Lin-28 to pre-microRNA of let-7, which in its mature form promotes terminal differentiation of stem cells and suppresses tumors. The binding of Lin-28 to the immature version of let-7 blocks its cleavage into mature microRNA, thereby preventing it from carrying out its function in tumor suppression. Lin-28, in combination with additional factors, has been used to reprogram human somatic cells into induced pluripotent stem cells.



Flow cytometric analysis of Lin-28 expression in human embryonic stem (ES) cells. H9 human ES cells (WiCell, Madison, WI) grown on irradiated mouse embryonic fibroblasts were harvested with Accutase™ (Cat. No. 561527), fixed with BD Cytotfix™ fixation buffer (Cat. No. 554655) and permeabilized with BD Phosflow™ Perm buffer III (Cat. No. 558050). The cells were then stained with either Alexa Fluor® 488 Mouse IgG1, κ isotype control (dashed line, Cat. No. 557782) or Alexa Fluor® 488 Mouse anti-Human Lin-28 monoclonal antibody (solid line, Cat. No. 563597) at matched concentrations. Histograms were derived from gated events based on light scattering characteristics of H9 human ES cells. Flow cytometry was performed on a BD LSRFortessa™ flow cytometry system.

Preparation and Storage

Store undiluted at 4°C and protected from prolonged exposure to light. Do not freeze.

The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography.

The antibody was conjugated to Alexa Fluor® 488 under optimum conditions, and unreacted Alexa Fluor® 488 was removed.

Application Notes

Application

Intracellular staining (flow cytometry)	Routinely Tested
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Suggested Companion Products

Catalog Number	Name	Size	Clone
561527	Accutase™ Cell Detachment Solution	100 ml	(none)
554655	Fixation Buffer	100 ml	(none)
558050	Perm Buffer III	125 ml	(none)
557782	Alexa Fluor® 488 Mouse IgG1 κ Isotype Control	50 tests	MOPC-21
554656	Stain Buffer (FBS)	500 ml	(none)

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Product Notices

1. This reagent has been pre-diluted for use at the recommended Volume per Test. We typically use 1×10^6 cells in a 100- μ l experimental sample (a test).
2. Source of all serum proteins is from USDA inspected abattoirs located in the United States.
3. An isotype control should be used at the same concentration as the antibody of interest.
4. Please refer to www.bdbiosciences.com/pharming/en/protocols for technical protocols.
5. The Alexa Fluor®, Pacific Blue™, and Cascade Blue® dye antibody conjugates in this product are sold under license from Molecular Probes, Inc. for research use only, excluding use in combination with microarrays, or as analyte specific reagents. The Alexa Fluor® dyes (except for Alexa Fluor® 430), Pacific Blue™ dye, and Cascade Blue® dye are covered by pending and issued patents.
6. Alexa Fluor® 488 fluorochrome emission is collected at the same instrument settings as for fluorescein isothiocyanate (FITC).
7. Alexa Fluor® is a registered trademark of Molecular Probes, Inc., Eugene, OR.
8. Caution: Sodium azide yields highly toxic hydrazoic acid under acidic conditions. Dilute azide compounds in running water before discarding to avoid accumulation of potentially explosive deposits in plumbing.
9. For fluorochrome spectra and suitable instrument settings, please refer to our Multicolor Flow Cytometry web page at www.bdbiosciences.com/colors.
10. Accutase is a registered trademark of Innovative Cell Technologies, Inc.

References

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- Yu J, Vodyanik MA, Smuga-Otto K, et al. Induced pluripotent stem cell lines derived from human somatic cells. *Science.* 2007; 318(5858):1917-1920. (Biology)

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