abcam

Product datasheet

# Anti-Aly/Ref antibody [11G5] ab6141

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## Overview

| | |
|---|---|
| **Product name** | Anti-Aly/Ref antibody [11G5] |
| **Description** | Mouse monoclonal [11G5] to Aly/Ref |
| **Host species** | Mouse |
| **Tested applications** | **Suitable for:** Flow Cyt, IHC-P, ICC/IF |
| **Species reactivity** | **Reacts with:** Human |
| **Immunogen** | Fusion protein corresponding to Human Aly/Ref.<br>Database link: **Q86V81** |
| **General notes** | The Life Science industry has been in the grips of a reproducibility crisis for a number of years. Abcam is leading the way in addressing this with our range of recombinant monoclonal antibodies and knockout edited cell lines for gold-standard validation. Please check that this product meets your needs before purchasing.<br>If you have any questions, special requirements or concerns, please send us an inquiry and/or contact our Support team ahead of purchase. Recommended alternatives for this product can be found below, along with publications, customer reviews and Q&As |

## Properties

| | |
|---|---|
| **Form** | Liquid |
| **Storage instructions** | Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C or -80°C. Avoid freeze / thaw cycle. |
| **Storage buffer** | Preservative: 0.1% Sodium azide<br>Constituent: PBS |
| **Purity** | Protein A purified |
| **Purification notes** | Purified from supernatant. |
| **Clonality** | Monoclonal |
| **Clone number** | 11G5 |
| **Myeloma** | Sp2/0 |
| **Isotype** | IgG1 |

## Applications

## Applications

**The Abpromise guarantee** Our **Abpromise guarantee** covers the use of ab6141 in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

| Application | Abreviews | Notes |
|---|---|---|
| **Flow Cyt** | | Use 1µg for $10^6$ cells.<br>**ab170190** - Mouse monoclonal IgG1, is suitable for use as an isotype control with this antibody. |
| **IHC-P** | | Use a concentration of 1 µg/ml. Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol. |
| **ICC/IF** | | Use at an assay dependent concentration. |

## Target

**Function**

Component of the THO subcomplex of the TREX complex. The TREX complex specifically associates with spliced mRNA and not with unspliced pre-mRNA. It is recruited to spliced mRNAs by a transcription-independent mechanism. Binds to mRNA upstream of the exon-junction complex (EJC) and is recruited in a splicing- and cap-dependent manner to a region near the 5' end of the mRNA where it functions in mRNA export. The recruitment occurs via an interaction between THOC4 and the cap-binding protein NCBP1. DDX39B functions as a bridge between THOC4 and the THO complex. TREX complex is essential for the export of Kaposi's sarcoma-associated herpesvirus (KSHV) intronless mRNAs and infectious virus production. The recruitment of the TREX complex to the intronless viral mRNA occurs via an interaction between KSHV ORF57 protein and THOC4. THOC4 in conjunction with THOC5 functions in NXF1-NXT1 mediated nuclear export of HSP70 mRNA.
Component of a splicing-dependent multiprotein exon junction complex (EJC) deposited at splice junction on mRNAs. The EJC is a dynamic structure consisting of a few core proteins and several more peripheral nuclear and cytoplasmic associated factors that join the complex only transiently either during EJC assembly or during subsequent mRNA metabolism. Acts as chaperone and promotes the dimerization of transcription factors containing basic leucine zipper (bZIP) domains and thereby promotes transcriptional activation. Plays a role in mRNA processing and export. May function as scaffold that mediates interactions between proteins and/or RNA. Is part of the exon junction complex that remains associated with spliced mRNA and plays an important role in mRNA export and nonsense-mediated RNA decay. Directs mRNA derived from Herpes simplex virus intron-less genes to the NXF1-mediated export pathway.

**Sequence similarities**

Belongs to the THOC4 family.
Contains 1 RRM (RNA recognition motif) domain.

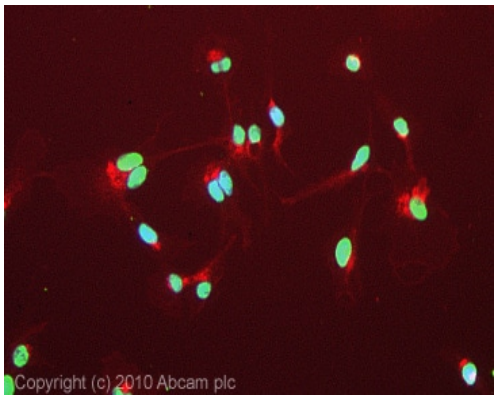
**Post-translational modifications**

Arg-50 and Arg-204 are dimethylated, probably to asymmetric dimethylarginine.
Phosphorylated upon DNA damage, probably by ATM or ATR.

**Cellular localization**

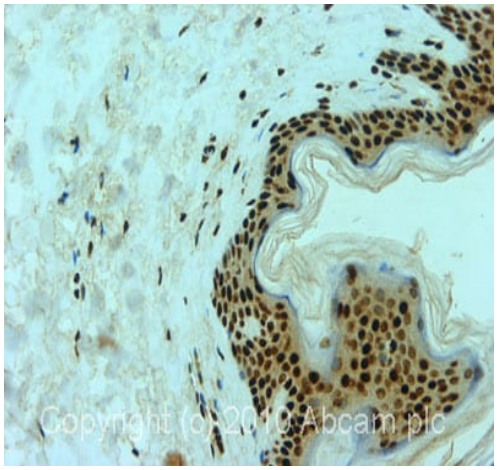
Nucleus. Nucleus speckle. Cytoplasm. Colocalizes with the core EJC, THOC4, NXF1 and DDX39B in the nucleus and nuclear speckles. Travels to the cytoplasm as part of the exon junction complex (EJC) bound to mRNA.

## Images




Immunocytochemistry/ Immunofluorescence - Anti-Aly/Ref antibody [11G5] (ab6141)

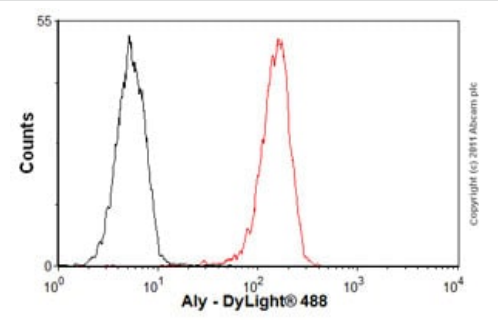
ICC/IF image of ab6141 stained HepG2 cells. The cells were 4% formaldehyde fixed (10 min) and then incubated in 1%BSA / 10% normal goat serum / 0.3M glycine in 0.1% PBS-Tween for 1h to permeabilise the cells and block non-specific protein-protein interactions. The cells were then incubated with the antibody (ab6141, 5µg/ml) overnight at +4°C. The secondary antibody (green) was Alexa Fluor® 488 goat anti-mouse IgG (H+L) used at a 1/1000 dilution for 1h. Alexa Fluor® 594 WGA was used to label plasma membranes (red) at a 1/200 dilution for 1h. DAPI was used to stain the cell nuclei (blue) at a concentration of 1.43µM.




Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Aly/Ref antibody [11G5] (ab6141)

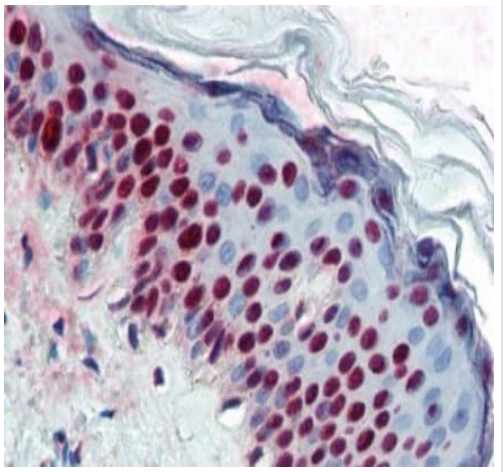
IHC image of ab6141 staining in human normal skin formalin fixed paraffin embedded tissue section, performed on a Leica Bond™ system using the standard protocol F. The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH6, epitope retrieval solution 1) for 20 mins. The section was then incubated with ab6141, 1µg/ml, for 15 mins at room temperature and detected using an HRP conjugated compact polymer system. DAB was used as the chromogen. The section was then counterstained with haematoxylin and mounted with DPX.

For other IHC staining systems (automated and non-automated) customers should optimize variable parameters such as antigen retrieval conditions, primary antibody concentration and antibody incubation times.




Flow Cytometry - Anti-Aly/Ref antibody [11G5] (ab6141)

Overlay histogram showing HeLa cells stained with ab6141 (red line). The cells were fixed with 80% methanol (5 min) and then permeabilized with 0.1% PBS-Tween for 20 min. The cells were then incubated in 1x PBS / 10% normal goat serum / 0.3M glycine to block non-specific protein-protein interactions followed by the antibody (ab6141, 1µg/1x$10^6$ cells) for 30 min at 22ºC. The secondary antibody used was DyLight® 488 goat anti-mouse IgG (H+L) (**ab96879**) at 1/500 dilution for 30 min at 22ºC. Isotype control antibody (black line) was mouse IgG1 [ICIGG1] (**ab91353**, 2µg/1x$10^6$ cells) used under the same conditions. Acquisition of >5,000 events was performed.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Aly/Ref antibody [11G5] (ab6141)

Immunohistochemistry showing Aly/Ref in formalin fixed paraffin embedded skin tissue using ab6141 at 1 µg/ml.



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