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Anti-LYRIC Picoband Antibody
Catalog # ABO12029

Specification

Anti-LYRIC Picoband Antibody - Product Information

Application	**WB, IHC-P, ICC**
Primary Accession	Q86UE4
Host	**Rabbit**
Reactivity	**Human, Mouse, Rat**
Clonality	**Polyclonal**
Format	**Lyophilized**

Description
Rabbit IgG polyclonal antibody for Protein LYRIC(MTDH) detection. Tested with WB, IHC-P, ICC in Human;Mouse;Rat.

Reconstitution
Add 0.2ml of distilled water will yield a concentration of 500ug/ml.

Anti-LYRIC Picoband Antibody - Additional Information

Gene ID 92140

Other Names
Protein LYRIC, 3D3/LYRIC, Astrocyte elevated gene-1 protein, AEG-1, Lysine-rich CEACAM1 co-isolated protein, Metadherin, Metastasis adhesion protein, MTDH, AEG1, LYRIC

Calculated MW
63837 MW KDa

Application Details
Immunohistochemistry(Paraffin-embedded Section), 0.5-1 µg/ml, By Heat
Immunocytochemistry, 0.5-1 µg/ml
Western blot, 0.1-0.5 µg/ml

Subcellular Localization
Endoplasmic reticulum membrane; Single-pass membrane protein. Nucleus membrane ; Single-pass membrane protein . Cell junction, tight junction . Nucleus, nucleolus . Cytoplasm, perinuclear region. In epithelial cells, recruited to tight junctions (TJ) during the maturation of the TJ complexes. A nucleolar staining may be due to nuclear targeting of an isoform lacking the transmembrane domain (By similarity). TNF-alpha causes translocation from the cytoplasm to the nucleus. .

Tissue Specificity
Widely expressed with highest levels in muscle-dominating organs such as skeletal muscle, heart, tongue and small intestine and in endocrine glands such as thyroid and adrenal gland. Overexpressed in various cancers including breast, brain, prostate, melanoma and glioblastoma multiforme. .

Protein Name
Protein LYRIC

Contents
Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na2HPO4, 0.05mg NaN3.

Immunogen
E.coli-derived human LYRIC recombinant protein (Position: D101-Q270). Human LYRIC shares 94% amino acid (aa) sequence identity with both mouse and rat LYRIC.

Purification
Immunogen affinity purified.

Cross Reactivity
No cross reactivity with other proteins

Storage	**At -20˚C for one year. After r˚Constitution, at 4˚C for one month. It˚Can also be aliquotted and stored frozen at -20˚C for a longer time.Avoid repeated freezing and thawing.**

Anti-LYRIC Picoband Antibody - Protein Information

Name MTDH

Synonyms AEG1, LYRIC

Function
Down-regulates SLC1A2/EAAT2 promoter activity when expressed ectopically. Activates the nuclear factor kappa-B (NF-kappa-B) transcription factor. Promotes anchorage-independent growth of immortalized melanocytes and astrocytes which is a key component in tumor cell expansion. Promotes lung metastasis and also has an effect on bone and brain metastasis, possibly by enhancing the seeding of tumor cells to the target organ endothelium. Induces chemoresistance.

Cellular Location
Endoplasmic reticulum membrane; Single-pass membrane protein. Nucleus membrane; Single-pass membrane protein. Cell junction, tight junction Nucleus, nucleolus. Cytoplasm, perinuclear region Note=In epithelial cells, recruited to tight junctions (TJ) during the maturation of the TJ complexes. A nucleolar staining may be due to nuclear targeting of an isoform lacking the transmembrane domain (By similarity). TNF-alpha causes translocation from the cytoplasm to the nucleus.

Tissue Location
Widely expressed with highest levels in muscle- dominating organs such as skeletal muscle, heart, tongue and small intestine and in endocrine glands such as thyroid and adrenal gland Overexpressed in various cancers including breast, brain, prostate, melanoma and glioblastoma multiforme.

Anti-LYRIC Picoband Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry

- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

Anti-LYRIC Picoband Antibody - Images

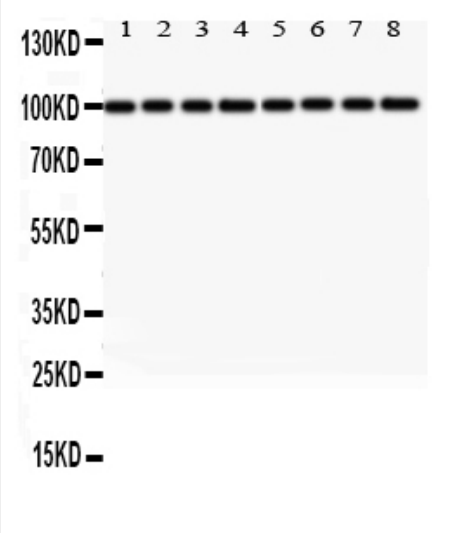

Figure 1. Western blot analysis of LYRIC using anti-LYRIC antibody (ABO12029). Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 50ug of sample under reducing conditions. Lane 1: Rat Skeletal Muscle Tissue Lysate,Lane 2: Mouse Skeletal Muscle Tissue Lysate,Lane 3: Rat Cardiac Muscle Tissue Tissue Lysate,Lane 4: Mouse Cardiac Muscle Tissue Lysate,Lane 5: MCF-7 Whole Cell Lysate,Lane 6: U87 Whole Cell Lysate,Lane 7: 22RV1 Whole Cell Lysate,Lane 8: PC-12 Whole Cell Lysate. After Electrophoresis, proteins were transferred to a Nitrocellulose membrane at 150mA for 50-90 minutes. Blocked the membrane with 5% Non-fat Milk/ TBS for 1.5 hour at RT. The membrane was incubated with rabbit anti-LYRIC antigen affinity purified polyclonal antibody (Catalog # ABO12029) at 0.5 Î¼g/mL overnight at 4Â°C, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-rabbit IgG-HRP secondary antibody at a dilution of 1:10000 for 1.5 hour at RT. The signal is developed using an Enhanced Chemiluminescent detection (ECL) kit with Tanon 5200 system. A specific band was detected for LYRIC at approximately 100KD. The expected band size for LYRIC is at 64KD.

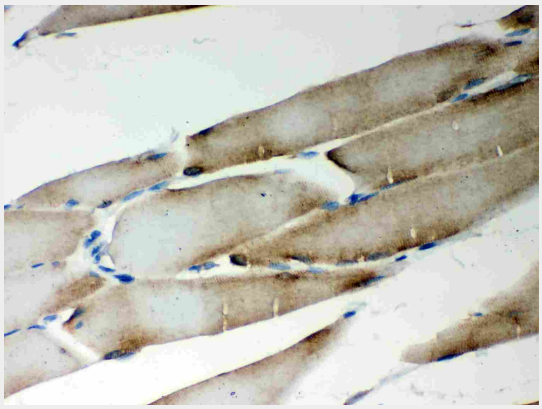

Figure 2. IHC analysis of LYRIC using anti-LYRIC antibody (ABO12029).LYRIC was detected in paraffin-embedded section of Rat Skeletal Muscle Tissue. Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was

blocked with 10% goat serum. The tissue section was then incubated with 1Î¼g/ml rabbit anti-LYRIC Antibody (ABO12029) overnight at 4Â°C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37Â°C. The tissue section was developed using Strepavidin-Biotin-Complex (SABC) with DAB as the chromogen.

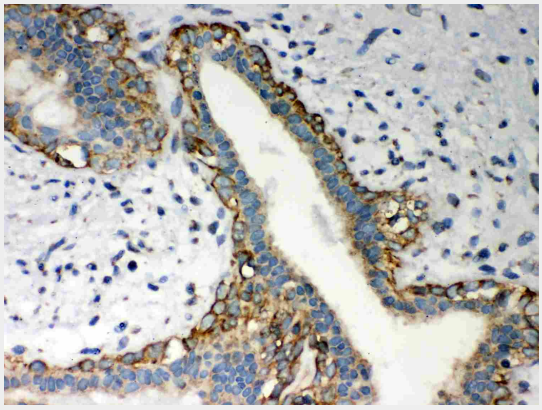

Figure 3. IHC analysis of LYRIC using anti-LYRIC antibody (ABO12029).LYRIC was detected in paraffin-embedded section of Human Mammary Cancer Tissue. Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1Î¼g/ml rabbit anti-LYRIC Antibody (ABO12029) overnight at 4Â°C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37Â°C. The tissue section was developed using Strepavidin-Biotin-Complex (SABC) with DAB as the chromogen.

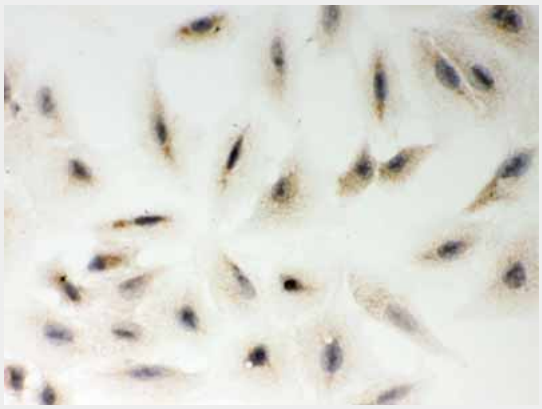

Figure 4. IHC analysis of LYRIC using anti-LYRIC antibody (ABO12029).LYRIC was detected in immunocytochemical section of A549 cell. Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1Î¼g/ml rabbit anti-LYRIC Antibody (ABO12029) overnight at 4Â°C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37Â°C. The tissue section was developed using Strepavidin-Biotin-Complex (SABC) with DAB as the chromogen.

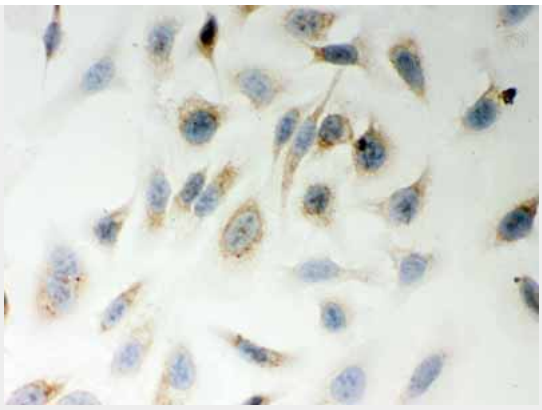

Figure 5. IHC analysis of LYRIC using anti-LYRIC antibody (ABO12029).LYRIC was detected in immunocytochemical section of Hela cell. Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1Î¼g/ml rabbit anti-LYRIC Antibody (ABO12029) overnight at 4Â°C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37Â°C. The tissue section was developed using Strepavidin-Biotin-Complex (SABC) with DAB as the chromogen.

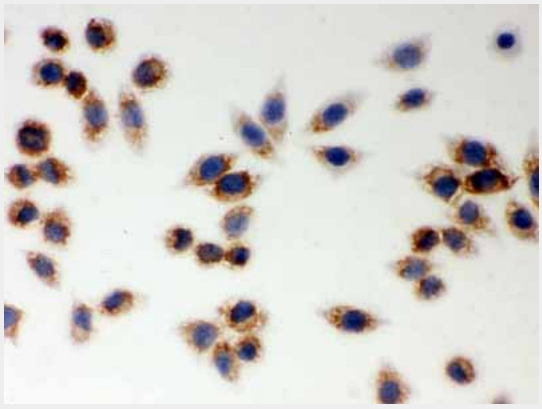

Figure 6. IHC analysis of LYRIC using anti-LYRIC antibody (ABO12029).LYRIC was detected in immunocytochemical section of SMMC-7721 cell. Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1Î¼g/ml rabbit anti-LYRIC Antibody (ABO12029) overnight at 4Â°C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37Â°C. The tissue section was developed using Strepavidin-Biotin-Complex (SABC) with DAB as the chromogen.

Anti-LYRIC Picoband Antibody - Background

MTDH (Metadherin), also known as protein LYRIC or astrocyte elevated gene-1 protein (AEG-1) is a protein that in humans is encoded by the MTDH gene. AEG-1 is involved in HIF-1alpha mediated angiogenesis. AEG-1 also interacts with SND1 and involved in RNA-induced silencing complex (RISC) and plays very important role in RISC and miRNA functions. AEG-1 induces an oncogene called Late SV40 factor (LSF/TFCP2) which is involved in thymidylate synthase (TS) induction and DNA biosynthesis synthesis. Late SV40 factor (LSF/TFCP2) enhances angiogenesis by transcriptionally up-regulating matrix metalloproteinase-9 (MMP9). AEG-1 acts as an oncogene in melanoma, malignant glioma, breast cancer and hepatocellular carcinoma. It is highly expressed in these cancers and helps in progression and development of these cancers. It is induced by c-Myc oncogene and plays very important role in anchorage independent growth of cancer cells.