

## DESCRIPTION

|                           |                                                                                                                                                                                                         |
|---------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Species Reactivity</b> | Human                                                                                                                                                                                                   |
| <b>Specificity</b>        | Detects human Metadherin in direct ELISAs and Western blots. In direct ELISAs, 100% cross-reactivity with recombinant mouse Metadherin is observed.                                                     |
| <b>Source</b>             | Polyclonal Sheep IgG                                                                                                                                                                                    |
| <b>Purification</b>       | Antigen Affinity-purified                                                                                                                                                                               |
| <b>Immunogen</b>          | <i>E. coli</i> -derived recombinant human Metadherin<br>Lys168-Ser298<br>Accession # Q86UE4                                                                                                             |
| <b>Conjugate</b>          | Alexa Fluor 647<br>Excitation Wavelength: 650 nm<br>Emission Wavelength: 668 nm                                                                                                                         |
| <b>Formulation</b>        | Supplied 0.2mg/ml in 1X PBS with RDF1 and 0.09% Sodium Azide                                                                                                                                            |
|                           | *Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions. |

## APPLICATIONS

**Please Note:** Optimal dilutions should be determined by each laboratory for each application. [General Protocols](#) are available in the Technical Information section on our website.

|                             |                                                                        |
|-----------------------------|------------------------------------------------------------------------|
| <b>Western Blot</b>         | Optimal dilution of this antibody should be experimentally determined. |
| <b>Immunocytochemistry</b>  | Optimal dilution of this antibody should be experimentally determined. |
| <b>Immunohistochemistry</b> | Optimal dilution of this antibody should be experimentally determined. |

## PREPARATION AND STORAGE

|                                |                                                                                                                   |
|--------------------------------|-------------------------------------------------------------------------------------------------------------------|
| <b>Shipping</b>                | The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below. |
| <b>Stability &amp; Storage</b> | Protect from light. Do not freeze. 12 months from date of receipt, 2 to 8 °C as supplied                          |

## BACKGROUND

MTDH (Metadherin; also LYRIC and Astrocyte Elevated Gene product-1/AEG1) is an 80 kDa membrane-bound protein that belongs to no known structural protein family. It has restricted expression, being found in breast ductal epithelium, striated muscle, select neurons and astrocytes, as well as multiple tumor types of diverse origin. MTDH is considered a mediator of Myc and Ha-Ras, and its activity is associated with stimulation of the  $\beta$ -catenin/Wnt and NF $\kappa$ B signaling pathways. It is also believed to contribute to tight junction formation via an interaction with ZO-1. MTDH is also found in the nucleus where it complexes with CBP and p65. Human MTDH is 582 amino acids (aa) in length. It appears to be a type III transmembrane protein (N-terminus luminal/extracellular with no signal sequence) that is found embedded in both the plasma membrane and ER. It contains an N-terminal luminal region (aa 1-48), plus a large 513 aa cytoplasmic domain (aa 70-582) that possesses at least 11 utilized Ser/Thr phosphorylation sites. There is the potential for ubiquitination, SUMOylation, acetylation and proteolytic processing, and this may account for multiple bands in SDS-PAGE that represent MWs of 20, 35, 50-55, 70-75, and 86 kDa. Over aa 169-298, human MTDH shares 97% aa identity with mouse MDTH.

## PRODUCT SPECIFIC NOTICES

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