

## DESCRIPTION

|                                                                                                                                                                                                         |                                                                                              |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------|
| <b>Species Reactivity</b>                                                                                                                                                                               | Human                                                                                        |
| <b>Specificity</b>                                                                                                                                                                                      | Detects human GRAIL/RNF128 in direct ELISAs and Western blots.                               |
| <b>Source</b>                                                                                                                                                                                           | Polyclonal Sheep IgG                                                                         |
| <b>Purification</b>                                                                                                                                                                                     | Antigen Affinity-purified                                                                    |
| <b>Immunogen</b>                                                                                                                                                                                        | <i>E. coli</i> -derived recombinant human GRAIL/RNF128<br>Val42-Pro161<br>Accession # Q8TEB7 |
| <b>Conjugate</b>                                                                                                                                                                                        | Alexa Fluor 405<br>Excitation Wavelength: 405 nm<br>Emission Wavelength: 421 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.

**Western Blot** 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

GRAIL (Gene related to anergy in lymphocytes protein; also RNF128) is a 45-47 kDa, type I transmembrane E3 ubiquitin ligase. It is expressed in the endosomes of select cell types such as early myeloid progenitors and lymphocytes, and mediates the ubiquitination of membrane proteins such as CD3, CD40L, and CD83, plus the tetraspanins CD81 and CD151. GRAIL apparently regulates the threshold for T cell activation, and as such, plays a key role in autoimmunity. In Treg cells, GRAIL promotes suppressive activity by restricting Th17 gene expression. Mature human GRAIL is 390 amino acids (aa) in length (aa 39-428). It possesses a 169 aa luminal region (aa 39-207) and a 190 aa cytoplasmic domain. The luminal region contains one PA (protease-associated) domain that mediates protein-protein interactions (aa 48-193), and the cytoplasmic segment shows one zinc-finger region (aa 277-318). There is one splice variant that shows a 134 aa substitution for aa 1-161. Over aa 42-161, human GRAIL shares 98% aa identity with mouse GRAIL.

## PRODUCT SPECIFIC NOTICES

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