

## DESCRIPTION

|                                                                                                                                                                                                         |                                                                                              |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------|
| <b>Species Reactivity</b>                                                                                                                                                                               | Human                                                                                        |
| <b>Specificity</b>                                                                                                                                                                                      | Detects human HOIP/RNF31 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 HOIP/RNF31<br>Arg970-Lys1072<br>Accession # Q96EP0 |
| <b>Conjugate</b>                                                                                                                                                                                        | Alexa Fluor 750<br>Excitation Wavelength: 749 nm<br>Emission Wavelength: 775 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

RNF31 (RING [Really Interesting Gene] Finger Protein 31; also HOIL-1-interacting protein/HOIP, and Zn in-between-RING-finger ubiquitin-associated domain protein/ZIBRA) is a cytoplasmic E3 ubiquitin-protein ligase that is found in breast epithelium and multiple cancer types. Although its predicted MW is 102 kDa, it runs anomalously at 95-135 kDa in SDS-Page. Ubiquitin (Ub) chains are typically thought of as 9 kDa additions to Lys residues of target molecules. The activity associated with Ub addition depends upon the location of the attachment, and the monomeric vs. polymeric nature of the chains. Ub can also be added to N-terminal Met residues by an intracellular complex called LUBAC (Linear Ub chain Assembly Complex). This complex is key to NFκB pathway activation. Following exposure of cells to cytokines, LUBAC ubiquitinates NEMO, which subsequently induces IKKβ phosphorylation, IκBα degradation, and NFκB translocation into the nucleus with gene activation. The LUBAC complex contains RNF31, HOIL-1L and sharpin, and it is now known that RNF31 is the catalyst for linear Ub chain formation. Human RNF31 is 1072 amino acids (aa) in length. It contains three consecutive RanBP2-type Zn finger domains (aa 299-438), a utilized phosphorylation site at Ser466, one UBA domain (aa 564-615), and two RING-type Zn finger domains (aa 699-747 and 860-909) with an intervening IBR-type Zn finger region (aa 779-841). There are at least two isoform variants, one that contains a 13 aa substitution for aa 1-164, and another that shows a deletion of aa 73-630 coupled to a deletion of aa 833-841. Human RNF31 shares 87% aa sequence identity with mouse RNF31.

## PRODUCT SPECIFIC NOTICES

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