

## DESCRIPTION

<b>Species Reactivity</b>	Human/Mouse
<b>Specificity</b>	Detects recombinant mouse RNF168 and recombinant human RNF168 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 mouse RNF168 Asn423-Arg565 Accession # Q80XJ2
<b>Formulation</b>	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied as a 0.2 µm filtered solution in PBS.

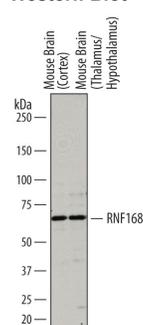
## APPLICATIONS

**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.

	Recommended Concentration	Sample
<b>Western Blot</b>	0.5 µg/mL	See Below
<b>Immunocytochemistry</b>	This antibody has been used at a concentration of 5-15 µg/mL to detect RNF168 in immersion fixed HeLa human cervical epithelial carcinoma cell line. Internal testing was not able to validate staining in a mouse cell line.	

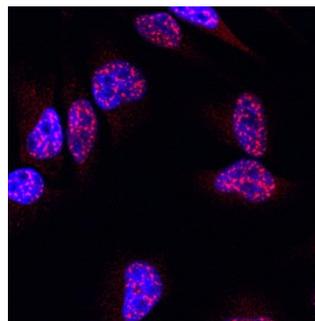
## DATA

### Western Blot



**Detection of Mouse RNF168 by Western Blot.** Western blot shows lysates of mouse brain (cortex) tissue and mouse brain (thalamus/hypothalamus) tissue. PVDF membrane was probed with 0.5 µg/mL of Sheep Anti-Mouse RNF168 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF7217) followed by HRP-conjugated Anti-Sheep IgG Secondary Antibody (Catalog # HAF016). A specific band was detected for RNF168 at approximately 65 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 1.

### Immunocytochemistry



### RNF168 in HeLa Human Cell Line.

RNF168 was detected in immersion fixed HeLa human cervical epithelial carcinoma cell line using Sheep Anti-Mouse RNF168 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF7217) at 10 µg/mL for 3 hours at room temperature. Cells were stained using the NorthernLights™ 557-conjugated Anti-Sheep IgG Secondary Antibody (red; Catalog # NL010) and counterstained with DAPI (blue). View our protocol for [Fluorescent ICC Staining of Cells on Coverslips](#).

## PREPARATION AND STORAGE

<b>Reconstitution</b>	Sterile PBS to a final concentration of 0.2 mg/mL.
<b>Shipping</b>	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
<b>Stability &amp; Storage</b>	<b>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</b> <ul style="list-style-type: none"> <li>● 12 months from date of receipt, -20 to -70 °C as supplied.</li> <li>● 1 month, 2 to 8 °C under sterile conditions after reconstitution.</li> <li>● 6 months, -20 to -70 °C under sterile conditions after reconstitution.</li> </ul>

## BACKGROUND

RNF168 (RING [really interesting new gene] finger protein 168; also E3 ubiquitin-protein ligase RNF168) is a 65 kDa (predicted) member of the RNF168 family of proteins. It is ubiquitously expressed, and serves as an E3 ubiquitin ligase. Following DNA damage, RNF8 is recruited to DNA double-strand breaks by phosphoMDC1. Here, RNF8 first monoubiquitinates histone H2A, and then promotes RNF168 recruitment. RNF168 now acts as an additional ubiquitinase, promoting multiple ubiquitinations plus the recruitment of 53BP1, a scaffold protein that holds DNA damage response elements. Mouse RNF168 is 565 amino acids (aa) in length. It contains one Zn-finger/RING domain (aa 16-55) plus two ubiquitin-interacting MIU motifs (aa 168-191 and 438-461). There are three potential Ser/Thr phosphorylation sites. Two potential isoform variants are reported. One shows an alternative start site at Met20, while a second possesses a two aa extension at the N-terminus coupled to a 13 aa substitution for aa 343-565. Over aa 423-565, mouse RNF168 shares 79% and 65.5% aa sequence identity with rat and human RNF168, respectively. Over aa 423-466, mouse RNF168 shares 98% aa sequence identity with human RNF168.