

## Datasheet: AHP1052

<b>Description:</b>	RABBIT ANTI 14-3-3 ZETA/DELTA
<b>Specificity:</b>	14-3-3 ZETA/DELTA
<b>Format:</b>	Serum
<b>Product Type:</b>	Polyclonal Antibody
<b>Isotype:</b>	Polyclonal IgG
<b>Quantity:</b>	0.1 ml

## Product Details

### Applications

This product has been reported to work in the following applications. This information is derived from testing within our laboratories, peer-reviewed publications or personal communications from the originators. Please refer to references indicated for further information. For general protocol recommendations, please visit [www.bio-rad-antibodies.com/protocols](http://www.bio-rad-antibodies.com/protocols).

	Yes	No	Not Determined	Suggested Dilution
Flow Cytometry			▪	
Immunohistology - Frozen			▪	
Immunohistology - Paraffin (1)	▪			1/400
ELISA	▪			
Immunoprecipitation			▪	
Western Blotting	▪			1/3000
Functional Assays			▪	

Where this product has not been tested for use in a particular technique this does not necessarily exclude its use in such procedures. Suggested working dilutions are given as a guide only. It is recommended that the user titrates the product for use in their own system using appropriate negative/positive controls.

**(1) This product requires antigen retrieval using heat treatment prior to staining of paraffin sections.**

<b>Target Species</b>	Sheep
<b>Species Cross Reactivity</b>	<p>Reacts with: Bovine, Chicken, Rat, Human, Mouse, Rabbit</p> <p>Based on sequence similarity, is expected to react with: Mammals</p> <p><b>N.B.</b> Antibody reactivity and working conditions may vary between species. Cross reactivity is derived from testing within our laboratories, peer-reviewed publications or personal communications from the originators. Please refer to references indicated for further information.</p>
<b>Product Form</b>	Serum - liquid

**Antiserum Preparation** Antisera to anti 14-3-3 zeta/delta were raised by repeated immunisations of rabbits with highly purified antigen.

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**Preservative Stabilisers** 0.09% Sodium Azide (NaN<sub>3</sub>)

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**Immunogen** Synthetic peptide corresponding to acetylated N-terminal sequence of sheep 14-3-3 zeta/delta.

Peptide sequence: Ac.MDKNELVQKAC

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**External Database Links** **UniProt:**  
[P29361](#) [Related reagents](#)

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**RRID** AB\_2241857

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**Specificity** **Rabbit anti 14-3-3ζ antibody** recognizes the acetylated N-terminal of 14-3-3 zeta and the phosphorylated zeta isoform (also known as 14-3-3 delta) in all mammals. These are members of the 14-3-3 family which consists of 30 kDa proteins involved in multiple protein kinase signaling pathways, regulation of cell cycle progression, cytoskeletal structure, transcription, intracellular trafficking and targeting. Protein interactions with 14-3-3 show distinct preference for its different isotypes and are regulated by phosphorylation of both 14-3-3 and the bound protein.

14-3-3ζ is a susceptibility gene for paranoid schizophrenia and is overexpressed in the temporal cortex of cognitively impaired Alzheimers patients. The protein binds yeast Sps1/Ste20-related kinase 1 (YSK1) and localizes to the golgi, possibly linking YSK1 signaling, protein transport, cell adhesion and migration. It co-localizes with epidermal growth factor receptor to the plasma membrane following epidermal growth factor signaling. The zeta isoform is involved in MAPKAPK2-mediated phosphorylation which may have a role in p38 MAPK-dependent inflammation. When bound to ADAM 22, 14-3-3 zeta is involved in cell adhesion. 14-3-3ζ also interacts with cofilin, LIM-domain-containing protein kinase 1, protein kinase B/Akt and GPI alpha. 14-3-3ζ can be phosphorylated at serine 184 to produce 14-3-3 delta.

Rabbit anti 14-3-3ζ antibody may not react with recombinant proteins that are not N-acetylated.

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**Histology Positive Control Tissue** Normal brain tissue.

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**Western Blotting** AHP1052 detects a band of approximately 30kDa in HEK293 cell lysates.

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**References**

1. Martin, H. *et al.* (1993) Antibodies against the major brain isoforms of 14-3-3 protein. An antibody specific for the N-acetylated amino-terminus of a protein. [FEBS Lett. 331 \(3\): 296-303.](#)
2. Wang, Z. *et al.* (2011) The prognostic value of 14-3-3 isoforms in vulvar squamous cell carcinoma cases: 14-3-3β and ε are independent prognostic factors for these tumors.

[PLoS One. 6: e24843.](#)

3. Piesiewicz, A. *et al.* (2012) Pineal arylalkylamine N-acetyltransferase (Aanat) gene expression as a target of inflammatory mediators in the chicken. [Gen Comp Endocrinol. 179 \(2\): 143-51.](#)
4. Taurino, F. *et al.* (2014) Short-term type-1 diabetes differentially modulates 14-3-3 proteins in rat brain and liver. [Eur J Clin Invest. 44 \(4\): 350-8.](#)
5. De, S. *et al.* (2012) Expression of 14-3-3 protein isoforms in mouse oocytes, eggs and ovarian follicular development [BMC Res Notes. 5: 57.](#)

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**Further Reading** 1. Aitken, A. (2006) 14-3-3 proteins: a historic overview. [Semin Cancer Biol. 16 \(3\): 162-72.](#)

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**Storage** Store at +4°C or at -20°C if preferred.  
Storage in frost-free freezers is not recommended.  
This product should be stored undiluted. Avoid repeated freezing and thawing as this may denature the antibody. Should this product contain a precipitate we recommend microcentrifugation before use.

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**Guarantee** 18 months from date of despatch.

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**Health And Safety Information** Material Safety Datasheet documentation #10081 available at:  
10081: <https://www.bio-rad-antibodies.com/uploads/MSDS/10081.pdf>

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**Regulatory** For research purposes only

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## Related Products

### Recommended Secondary Antibodies

- Sheep Anti Rabbit IgG (STAR34...) [FITC](#)  
Goat Anti Rabbit IgG (H/L) (STAR124...) [HRP](#)  
Goat Anti Rabbit IgG (Fc) (STAR121...) [Biotin](#), [FITC](#), [HRP](#)  
Sheep Anti Rabbit IgG (STAR35...) [RPE](#)  
Sheep Anti Rabbit IgG (STAR36...) [DyLight®488](#), [DyLight®680](#), [DyLight®800](#)

### Recommended Useful Reagents

[TidyBlot WESTERN BLOT DETECTION REAGENT:HRP \(STAR209P\)](#)

<b>North &amp; South America</b>	Tel: +1 800 265 7376 Fax: +1 919 878 3751 Email: <a href="mailto:antibody_sales_us@bio-rad.com">antibody_sales_us@bio-rad.com</a>	<b>Worldwide</b>	Tel: +44 (0)1865 852 700 Fax: +44 (0)1865 852 739 Email: <a href="mailto:antibody_sales_uk@bio-rad.com">antibody_sales_uk@bio-rad.com</a>	<b>Europe</b>	Tel: +49 (0) 89 8090 95 21 Fax: +49 (0) 89 8090 95 50 Email: <a href="mailto:antibody_sales_de@bio-rad.com">antibody_sales_de@bio-rad.com</a>
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