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Certificate of Analysis and Data Sheet

Rabbit Anti 14-3-3 Zeta

With HRP Conjugated Secondary Antibody

Catalog No.
DS-PB-00014

Target Species
Sheep

Isotype
IgG

Preparation

Immunogen: Synthetic peptide corresponding to acetylated N-terminal sequence of sheep 14-3-3 zeta. Peptide sequence: Ac.MDKNELVQKAC

Preparation: Antisera to anti 14-3-3 zeta were raised by repeated immunizations of rabbits with highly purified antigen.

Formulation

Product Type: Polyclonal Antibody

Product Form: Serum - liquid

Preservative Stabilizers: 0.09% Sodium Azide

Specificity

DS-PB-00014 recognizes the acetylated N-terminal of 14-3-3 zeta in all mammals. It is a member of the 14-3-3 family which consists of 30kDa proteins that are 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.

14-3-3 zeta 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. 14-3-3 zeta also interacts with cofilin, LIM-domain-containing protein kinase 1, protein kinase B/Akt and GPI alpha.

This antibody reacts with Bovine, Chicken, Rat, Human and Mouse. Antibody reactivity and working conditions may vary between species.

DS-PB-00014 may not react with recombinant proteins that are not N-acetylated.

**The products are furnished for LABORATORY RESEARCH USE ONLY.
Not for diagnostic or therapeutic use.**



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Applications

Table Summary of antibody applications and working conditions

Options Functions	YES	NO	Not determined	Recommended Work dilution or concentration
ELISA	.			
IHC – Paraffin (1,2)	.			
IHC - Frozen			.	
Western Blot (3)	.			

Note: Other applications have not been tested. Optimal dilutions should be determined by each laboratory for each application.

- (1) This product requires antigen retrieval using heat treatment prior to staining of paraffin sections.
(2) Histology positive control: Normal brain tissue
(3) Western Blot: Detects a band of approximately 30kDa in HEK293 cell lysates.

Secondary Antibody Applications

Options Functions	YES	NO	Not determined	Recommended Work dilution or concentration
Immunoassay (ELISA, Western blot)	.			1:5000-1:10000

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.

Shelf Life: 18 months from date of dispatch

References

1. Martin, H. *et al.* (1993) Antibodies against major brain isoforms of 14-3-3 protein. An antibody specific for the N-acetylated amino-terminus of a protein. FEBS 331: 296-303.
2. Aitken, A. *et al.* (2006) 14-3-3 proteins: A historic overview. Seminars in Cancer Biology 16: 162-172.

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