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# Anti-14-3-3 sigma Picoband Antibody

Catalog # ABO10154

## Product Information

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| **Application** | WB, E |
| **Primary Accession** | P31947 |
| **Host** | Rabbit |
| **Reactivity** | Human, Mouse, Rat |
| **Clonality** | Polyclonal |
| **Format** | Lyophilized |
| **Description** | Rabbit IgG polyclonal antibody for 14-3-3 sigma detection. Tested with WB, Direct ELISA in Human;Mouse;Rat. |
| **Reconstitution** | Add 0.2ml of distilled water will yield a concentration of 500ug/ml. |

## Additional Information

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| **Gene ID** | 2810 |
| **Other Names** | 14-3-3 protein sigma, Epithelial cell marker protein 1, Stratifin, SFN, HME1 |
| **Calculated MW** | 27774 |
| **Application Details** | Western blot, 0.1-0.5 □g/ml<br>Direct ELISA, 0.1-0.5 □g/ml |
| **Subcellular Localization** | Cytoplasm. Nucleus . Secreted. May be secreted by a non-classical secretory pathway. |
| **Tissue Specificity** | Present mainly in tissues enriched in stratified squamous keratinizing epithelium. |
| **Source** | Eukaryota |
| **Contents** | Each vial contains 4mg Trehalose, 0.9mg NaCl, 0.2mg $Na_2HPO_4$, 0.05mg $NaN_3$. |
| **Immunogen** | E. coli-derived human 14-3-3 sigma recombinant protein (Position: M1-S248). |
| **Cross Reactivity** | No cross reactivity with other proteins. |
| **Storage** | At -20˚C; for one year. After r˚Constitution, at 4˚C; for one month. It˚Can also be aliquotted and stored frozen at -20˚C; for a longer time. Avoid repeated freezing and thawing. |

## Protein Information

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| **Name** | SFN ( HGNC:10773) |
| **Function** | Adapter protein implicated in the regulation of a large spectrum of both general and specialized signaling pathways (PubMed:15731107, PubMed:22634725, PubMed:28202711, PubMed:37797010). Binds to a large number of partners, usually by recognition of a phosphoserine or phosphothreonine motif (PubMed:15731107, PubMed:22634725, PubMed:28202711, PubMed:37797010). Binding generally results in the modulation of the activity of the binding partner (PubMed:15731107, PubMed:22634725, PubMed:28202711, PubMed:37797010). Promotes cytosolic retention of GBP1 GTPase by binding to phosphorylated GBP1, thereby inhibiting the innate immune response (PubMed:37797010). Also acts as a TP53/p53-regulated inhibitor of G2/M progression (PubMed:9659898). When bound to KRT17, regulates protein synthesis and epithelial cell growth by stimulating Akt/mTOR pathway (By similarity). Acts to maintain desmosome cell junction adhesion in epithelial cells via interacting with and sequestering PKP3 to the cytoplasm, thereby restricting its translocation to existing desmosome structures and therefore maintaining desmosome protein homeostasis (PubMed:24124604). Also acts to facilitate PKP3 exchange at desmosome plaques, thereby maintaining keratinocyte intercellular adhesion (PubMed:29678907). May also regulate MDM2 autoubiquitination and degradation and thereby activate p53/TP53 (PubMed:18382127). Upstream regulator of YAP1 localization in keratinocytes: binds and sequester YAP1 in the cytoplasm, limiting YAP1-dependent transcription and driving Hippo signaling and cell differentiation (By similarity). |
| **Cellular Location** | Cytoplasm. Nucleus. Secreted Note=May be secreted by a non-classical secretory pathway |
| **Tissue Location** | Present mainly in tissues enriched in stratified squamous keratinizing epithelium. |

## Background

Stratifin(SFN), also known as 14-3-3 protein sigma, is strongly induced by gamma irradiation and other DNA-damaging agents. The induction of 14-3-3-sigma is mediated by a p53 -responsive element located 1.8 kb upstream of its transcription start site. The protein, called stratifin, was shown to be diffusely distributed in the cytoplasm and was present in cultured epithelial cells. It was most abundant in tissues enriched in stratified keratinizing epithelium.

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