

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human HSP27 in direct ELISAs.
Source	Monoclonal Rat IgG _{2B} Clone # 967060
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	<i>E. coli</i> -derived recombinant human HSP27 Met1-Lys205 Accession # P04792
Conjugate	Alexa Fluor 750 Excitation Wavelength: 749 nm Emission Wavelength: 775 nm
Formulation	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.

Western Blot	Optimal dilution of this antibody should be experimentally determined.
Immunocytochemistry	Optimal dilution of this antibody should be experimentally determined.
Immunohistochemistry	Optimal dilution of this antibody should be experimentally determined.

PREPARATION AND STORAGE

Shipping	The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	Protect from light. Do not freeze. 12 months from date of receipt, 2 to 8 °C as supplied

BACKGROUND

Heat shock proteins (HSPs) are a family of highly conserved stress response proteins. Heat shock proteins function primarily as molecular chaperones by facilitating the folding of other cellular proteins, preventing protein aggregation or targeting improperly folded proteins to specific degradative pathways. HSPs are typically expressed at low levels under normal physiological conditions but are dramatically up-regulated in response to cellular stress. Elevated levels of HSPs have been observed in association with ischemia/reperfusion, cancer, and chronic heart failure. HSP27 is a member of the small heat shock protein family, which also includes HSP25 and the α -crystallins. Ser78 and Ser82 of HSP27 are phosphorylated in vivo in response to growth factors or heat shock, and the extent of phosphorylation plays a role in determining specific functions. HSP27 forms a large oligomer and functions as an anti-apoptotic molecule, regulating apoptosis through direct interaction with key components of the apoptotic pathway. HSP27 binds and sequesters cytochrome c released from the mitochondria in response to an apoptotic stimulus. This prevents the proper assembly of the apoptosome and subsequently, the activation of procaspase-9 and procaspase-3.

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