

DESCRIPTION

Species Reactivity	Mouse
Specificity	Detects mouse HSF1 in direct ELISAs. In direct ELISAs, approximately 6% cross-reactivity with recombinant mouse HSF4 is observed and less than 1% cross-reactivity with recombinant human HSF2 is observed.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	<i>E. coli</i> -derived recombinant mouse HSF1 Thr124-Tyr247 Accession # P38532
Formulation	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.

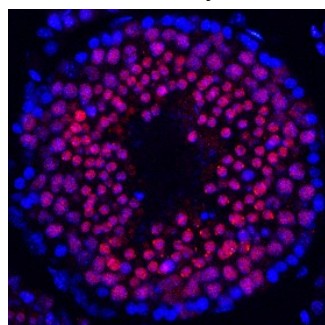
APPLICATIONS

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
Immunohistochemistry	5-15 µg/mL	See Below

DATA

Immunohistochemistry



HSF1 in Mouse Testes. HSF1 was detected in perfusion fixed frozen sections of mouse testes using Goat Anti-Mouse HSF1 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF7130) at 1.7 µg/mL overnight at 4 °C. Tissue was stained using the NorthernLights™ 557-conjugated Anti-Goat IgG Secondary Antibody (red; Catalog # NL001) and counterstained with DAPI (blue). Specific staining was localized to the nuclei of spermatocytes. View our protocol for [Fluorescent IHC Staining of Frozen Tissue Sections](#).

PREPARATION AND STORAGE

Reconstitution	Sterile PBS to a final concentration of 0.2 mg/mL.
Shipping	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
Stability & Storage	Use a manual defrost freezer and avoid repeated freeze-thaw cycles. <ul style="list-style-type: none"> ● 12 months from date of receipt, -20 to -70 °C as supplied. ● 1 month, 2 to 8 °C under sterile conditions after reconstitution. ● 6 months, -20 to -70 °C under sterile conditions after reconstitution.

BACKGROUND

HSF1 (Heat Shock Factor 1; also HSTF 1) is a 67-75 kDa member of the HSF family of proteins. It is constitutively expressed and functions as a transcriptional activator under heat shock conditions. Normally, it exists as an inactive, monomeric member of the HSP multichaperone complex. Following stress, it dissociates from the complex, homotrimerizes, undergoes multiple phosphorylations, and translocates to the nucleus. Nuclear HSF1 is SUMOylated on Lys298 and binds to heat shock elements in select genes such as HSP70. Mouse HSF1 is 525 amino acids (aa) in length. It contains a DNA binding domain (aa 15-120), two hydrophobic oligomerization regions (aa 130-203 and 380-405), a regulatory domain (aa 221-310), and a transactivation domain (aa 367-525). There are at least 13 potential Ser/Thr phosphorylation sites. When highly phosphorylated, HSF1 appears to run at about 82-85 kDa in SDS-PAGE; when SUMOylated, it runs anomalously at around 170 kDa in SDS-PAGE. One splice variant exists that shows a deletion of aa 413-434. Over aa 124-247, mouse HSF1 shares 94% and 99% aa identity with human and rat HSF1, respectively.