

## DESCRIPTION

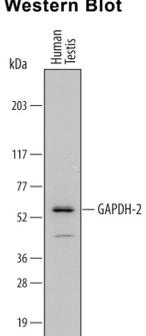
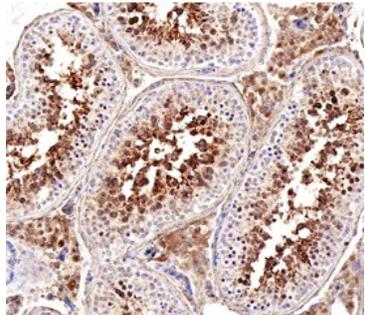
<b>Species Reactivity</b>	Human
<b>Specificity</b>	Detects human GAPDH-2 in direct ELISAs and Western blots. In direct ELISAs, less than 1% cross-reactivity with recombinant human GAPDH and recombinant mouse GAPDH is observed.
<b>Source</b>	Polyclonal Goat IgG
<b>Purification</b>	Antigen Affinity-purified
<b>Immunogen</b>	<i>E. coli</i> -derived recombinant human GAPDH-2 Glu75-Ala222 Accession # O14556
<b>Formulation</b>	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
<b>Western Blot</b>	1 µg/mL	See Below
<b>Immunohistochemistry</b>	5-15 µg/mL	See Below

## DATA

<p><b>Western Blot</b></p>  <p><b>Detection of Human GAPDH-2 by Western Blot.</b> Western blot shows lysates of human testis tissue. PVDF Membrane was probed with 1 µg/mL of Goat Anti-Human GAPDH-2 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF6276) followed by HRP-conjugated Anti-Goat IgG Secondary Antibody (Catalog # HAF109). A specific band was detected for GAPDH-2 at approximately 56 kDa (as indicated). This experiment was conducted under reducing conditions and using <a href="#">Immunoblot Buffer Group 1</a>.</p>	<p><b>Immunohistochemistry</b></p>  <p><b>GAPDH-2 in Human Testes.</b> GAPDH-2 was detected in immersion fixed paraffin-embedded sections of human testes using Goat Anti-Human GAPDH-2 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF6276) at 3 µg/mL overnight at 4 °C. Before incubation with the primary antibody, tissue was subjected to heat-induced epitope retrieval using Antigen Retrieval Reagent-Basic (Catalog # CTS013). Tissue was stained using the Anti-Goat HRP-DAB Cell &amp; Tissue Staining Kit (brown; Catalog # CTS008) and counterstained with hematoxylin (blue). Specific staining was localized to cytoplasm of sperm cells. View our protocol for <a href="#">Chromogenic IHC Staining of Paraffin-embedded Tissue Sections</a>.</p>
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## PREPARATION AND STORAGE

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

## BACKGROUND

GAPDH-2 (Glyceraldehyde-3-phosphate dehydrogenase 2; also GAPD2 and GAPDS) is a 40-44 kDa member of the GAPDH family of enzymes. Due to a high incidence of proline residues, it may migrate anomalously at 56 kDa in SDS-PAGE. GAPDH-2 is expressed only in testis as a homotetramer, where it is found in the cytoplasm bound to the sperm fibrous sheath. Unlike GAPDH that has multiple functions, GAPDH-2 appears to participate only in carbohydrate metabolism, generating energy via glycolysis for sperm motility and fertility. Human GAPDH-2 is 408 amino acids (aa) in length. There are two NAD binding sites (Asp106 and Asn388) with a catalytic region between aa 223-226. One splice variant shows a nine aa insertion after Ser220. Over aa 75-222, human GAPDH-2 shares 84% aa identity with mouse GAPDH-2.