

DESCRIPTION

| | |
|---------------------------|---|
| Species Reactivity | Human |
| Specificity | Detects human 15-PGDH/HPGD in direct ELISAs and Western blots. |
| Source | Polyclonal Goat IgG |
| Purification | Antigen Affinity-purified |
| Immunogen | <i>E. coli</i> -derived recombinant human 15-PGDH/HPGD Met1-Gln266 Accession # P15428 |
| 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. |

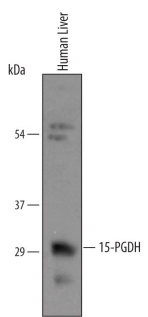
APPLICATIONS

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 |
|-----------------------|---------------------------|-----------|
| Western Blot | 1 µg/mL | See Below |
| Simple Western | 10 µg/mL | See Below |

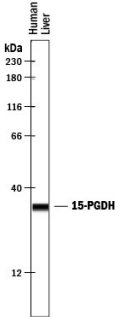
DATA

Western Blot



Detection of Human 15-PGDH/HPGD by Western Blot.
Western blot shows lysates of human liver tissue. PVDF membrane was probed with 1 µg/mL of Goat Anti-Human 15-PGDH/HPGD Antigen Affinity-purified Polyclonal Antibody (Catalog # AF5660) followed by HRP-conjugated Anti-Goat IgG Secondary Antibody (Catalog # HAF019). A specific band was detected for 15-PGDH/HPGD at approximately 29 kDa (as indicated). This experiment was conducted under reducing conditions and using *Immunoblot Buffer Group 8*.

Simple Western



Detection of Human 15-PGDH/HPGD by Simple Western™. Simple Western lane view shows lysates of human liver tissue, loaded at 0.2 mg/mL. A specific band was detected for 15-PGDH/HPGD at approximately 34 kDa (as indicated) using 10 µg/mL of Goat Anti-Human 15-PGDH/HPGD Antigen Affinity-purified Polyclonal Antibody (Catalog # AF5660) followed by 1:50 dilution of HRP-conjugated Anti-Goat IgG Secondary Antibody (Catalog # HAF109). This experiment was conducted under reducing conditions and using the 12-230 kDa separation system.

PREPARATION AND STORAGE

| | |
|--------------------------------|--|
| Reconstitution | Reconstitute at 0.2 mg/mL in sterile PBS. |
| 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

HPGD, or 15-hydroxyprostaglandin dehydrogenase, is a NAD⁺-linked dehydrogenase that oxidizes the hydroxyl group at position 15 of prostaglandins to a ketone, resulting in a loss of biological activity (1). HPGD is a major enzyme for the catabolism of prostaglandins. The enzyme is a member of the short-chain alcohol dehydrogenase family of enzymes (2). HPGD is a cytosolic enzyme expressed in most tissues, with highest expression levels in placenta, lung, and kidney (3). It is inhibited by aspirin and nonsteroidal anti-inflammatory drugs (4). Defects in HPGD are a cause of hypertrophic osteoarthropathy (5).

References:

1. Anggard, E. and B. Samuelsson (1964) *J. Biol. Chem.* **239**:4097.
2. Krook, M. *et al.* (1990) *Biochemistry* **29**:738.
3. Tai, H.H. (1976) *Biochemistry* **15**:4586.
4. Mak, O.T. *et al.* (1982) *Biosci. Rep.* **2**:503.
5. Uppal, S. *et al.* (2008) *Nat. Genet.* **40**:789.