

DESCRIPTION

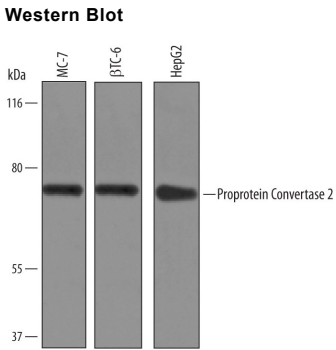
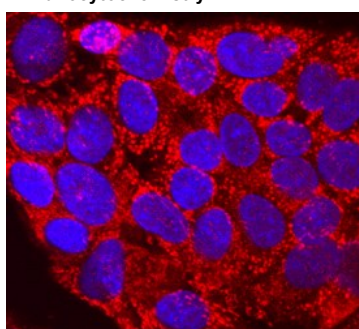
Species Reactivity	Human/Mouse
Specificity	Detects human Proprotein Convertase 2/PCSK2 in direct ELISAs and, human and mouse Proprotein Convertase 2/PCSK2 in Western blots.
Source	Polyclonal Sheep IgG
Purification	Antigen Affinity-purified
Immunogen	Chinese hamster ovary cell line CHO-derived recombinant human Proprotein Convertase 2/PCSK2 Gly110-Asn638 Accession # P16519
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
Immunocytochemistry	5-15 µg/mL	See Below
Immunoprecipitation	25 µg/mL	Conditioned cell culture medium spiked with Recombinant Human Proprotein Convertase 2/PCSK2 (Catalog # 6018-SE), see our available Western blot detection antibodies .

DATA

<p>Western Blot</p>  <p>Detection of Human and Mouse Proprotein Convertase 2/PCSK2 by Western Blot. Western blot shows lysates of MCF-7 human breast cancer cell line, betaTC-6 mouse beta cell insulinoma cell line, and HepG2 human hepatocellular carcinoma cell line. PVDF Membrane was probed with 1 µg/mL of Sheep Anti-Human Proprotein Convertase 2/PCSK2 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF6018) followed by HRP-conjugated Anti-Sheep IgG Secondary Antibody (Catalog # HAF016). A specific band was detected for Proprotein Convertase 2/PCSK2 at approximately 70 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 1.</p>	<p>Immunocytochemistry</p>  <p>Protein Convertase 2/PCSK2 in HepG2 Human Cell Line. Proprotein Convertase 2/PCSK2 was detected in immersion fixed HepG2 human hepatocellular carcinoma cell line using Sheep Anti-Human/Mouse Proprotein Convertase 2/PCSK2 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF6018) at 10 µg/mL for 3 hours at room temperature. Cells were stained using the NorthernLights™ 557-conjugated Anti-Sheep IgG Secondary Antibody (red; Catalog # NL010) and counterstained with DAPI (blue). This application has not been tested in mouse samples. View our protocol for Fluorescent ICC Staining of Cells on Coverslips.</p>
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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

Proprotein Convertase 2 (PCSK2) is a subtilisin-like serine peptidase that processes proteins into biologically active products in the secretory pathway. Like other furin/kexin family members, PCSK2 cleaves its substrates primarily after sites of paired basic amino acid residues (1). Autoactivation of PCSK2 occurs in a post-Golgi compartment of the secretory system (2). Interaction with the secretory protein 7B2 is required for proper activation of PCSK2 (3). The N-terminal domain of 7B2 stabilizes active PCSK2, and a C-terminal fragment of 7B2 can inhibit PCSK2 activity (4). rhPCSK2 was coexpressed with 7B2 to facilitate activation of the enzyme. PCSK2 is a major proteolytic processing enzyme of the regulated secretory pathway of the neuroendocrine system, where it generates a number of hormones and neuropeptides (5). Products of PCSK2 processing include enkephalins, insulin, somatostatin, dynorphin, and LHRH. Within the region used as an immunogen, human PCSK2 shares 97% aa identity with mouse PCSK2.

References:

1. Zhou, A. *et al.* (1999) *J. Biol. Chem.* **274**:20745.
2. Lamango, N.S. *et al.* (1999) *Arch. Biochem. Biophys.* **362**:275.
3. Zhu, X. and I. Lindberg (1995) *J. Cell Biol.* **129**:1641.
4. Lamango, N. *et al.* (1996) *Arch. Biochem. Biophys.* **330**:238.
5. Rouillé, Y. *et al.* (1995) *Front. Neuroendocrinol.* **16**:322.