

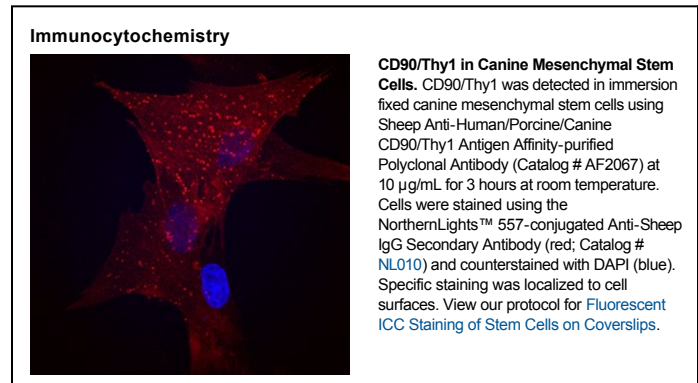
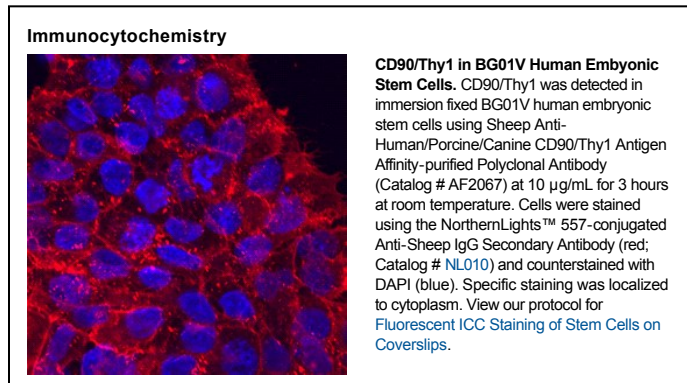
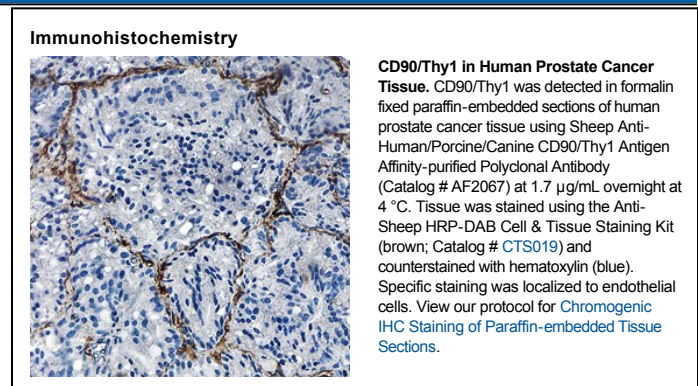
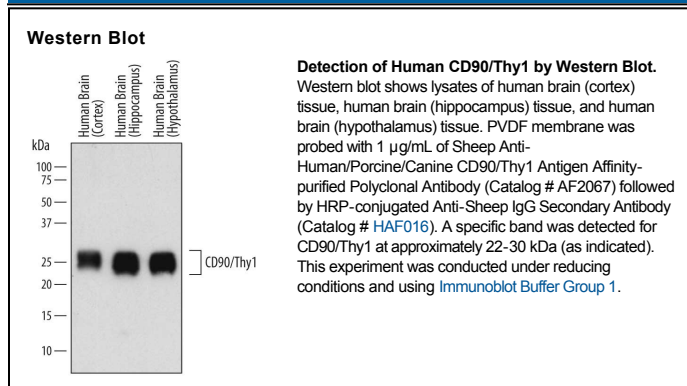
DESCRIPTION	
Species Reactivity	Human/Porcine/Canine
Specificity	Detects human CD90/Thy1 in direct ELISAs and Western blots. In direct ELISAs, approximately 50% cross-reactivity with recombinant mouse CD90 is observed.
Source	Polyclonal Sheep IgG
Purification	Antigen Affinity-purified
Immunogen	Chinese hamster ovary cell line CHO-derived recombinant human CD90/Thy1 Gln20-Ser141 Accession # P04216
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

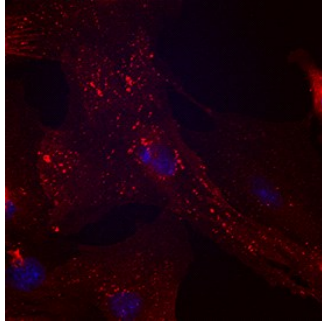
Please Note: Optimal dilutions should be determined by each laboratory for each application. [General Protocols](#) are available in the [Technical Information](#) section on our website.

	Recommended Concentration	Sample
Western Blot	1 µg/mL	See Below
Flow Cytometry	2.5 µL/10 ⁶ cells	See Below
Immunocytochemistry	5-15 µg/mL	See Below
Immunohistochemistry	5-15 µg/mL	See Below
CyTOF-ready	Ready to be labeled using established conjugation methods. No BSA or other carrier proteins that could interfere with conjugation.	

DATA

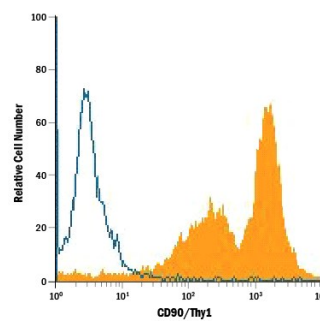


Immunocytochemistry



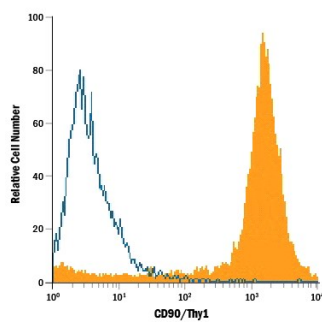
CD90/Thy1 in Porcine Mesenchymal Stem Cells. CD90/Thy1 was detected in immersion fixed porcine mesenchymal stem cells using Sheep Anti-Human/Porcine/Canine CD90/Thy1 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF2067) at 10 µg/mL for 3 hours at room temperature. Cells were stained using the NorthernLights™ 557-conjugated Anti-Sheep IgG Secondary Antibody (red; Catalog # NL010) and counterstained with DAPI (blue). Specific staining was localized to cell surfaces and cytoplasm. View our protocol for [Fluorescent ICC Staining of Stem Cells on Coverslips](#).

Flow Cytometry



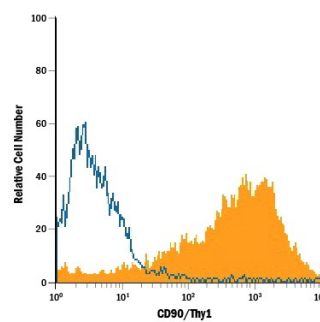
Detection of CD90/Thy1 in Human Mesenchymal Stem Cells by Flow Cytometry. Human mesenchymal stem cells were stained with Sheep Anti-Human/Porcine/Canine CD90/Thy1 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF2067, filled histogram) or isotype control antibody (Catalog # 5-001-A, open histogram), followed by PE-conjugated Anti-Sheep IgG Secondary Antibody (Catalog # F0126).

Flow Cytometry



Detection of CD90/Thy1 in Porcine Mesenchymal Stem Cells by Flow Cytometry. Porcine mesenchymal stem cells were stained with Sheep Anti-Human/Porcine/Canine CD90/Thy1 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF2067, filled histogram) or isotype control antibody (Catalog # 5-001-A, open histogram), followed by PE-conjugated Anti-Sheep IgG Secondary Antibody (Catalog # F0126).

Flow Cytometry



Detection of CD90/Thy1 in Canine Mesenchymal Stem Cells by Flow Cytometry. Canine mesenchymal stem cells were stained with Sheep Anti-Human/Porcine/Canine CD90/Thy1 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF2067, filled histogram) or isotype control antibody (Catalog # 5-001-A, open histogram), followed by PE-conjugated Anti-Sheep IgG Secondary Antibody (Catalog # F0126).

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

CD90 (also Thy1/Thymus cell antigen 1) is a 25-35 kDa glycoprotein member of the Immunoglobulin superfamily of molecules. It is expressed on neurons, ovarian follicular cells, endothelial cells, fibroblasts and circulating CD34⁺ stem cells, and appears to act as an adhesion molecule. CD90 is known to bind to integrins β2, β5 and β3, the latter often accompanied by additional binding to syndecan-4. In the postnatal nervous system, this inhibits neurite outgrowth while stabilizing newly formed axonal networks. In the vascular system, CD90 mediates the extravasation of leukocytes. And in lung, a CD90:αvβ5 interaction inhibits the extracellular activation of latent TGF-β. Mature human CD90 is a 111 amino acid (aa) GPI-linked protein (aa 20-130). It contains one V-type Ig-like domain (aa 20-126) with a heparin-binding motif (aa 56-60), and a GPI-anchor amidated cysteine at position 130. The integrin binding site consists of an Arg35LeuAsp37 tripeptide. CD90 apparently forms 50-60 kDa homodimers and 150 kDa homomultimers. There is one potential isoform variant that contains a 12 aa substitution for aa 1-13. Over aa 20-141, human CD90 shares 64% aa identity with mouse CD90 and 84% or 83% with horse and dog respectively.