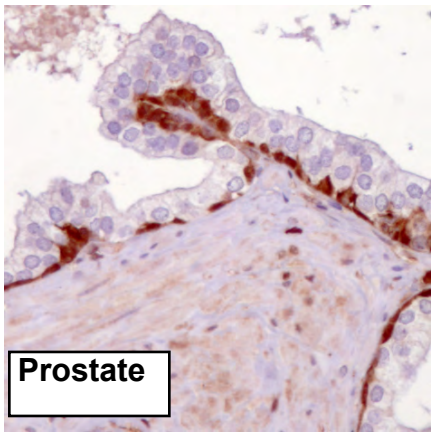
Protein S100-A6, *syn. Calcyclin*

UniProt
Function: May function as calcium sensor and contribute to cellular calcium signaling (Potential). May function by interacting with other proteins and indirectly play a role in the reorganization of the actin cytoskeleton and in cell motility. Binds 2 calcium ions. Calcium binding is cooperative.
Subcellular location: Nucleus envelope. Cytoplasm. Cell membrane; Peripheral membrane protein; Cytoplasmic side.

Two antibodies: Calcyclin-1 and Calcyclin-2 were tested. Both antibodies were approved for IHC. Calcyclin-1 was selected for full protein profiling.

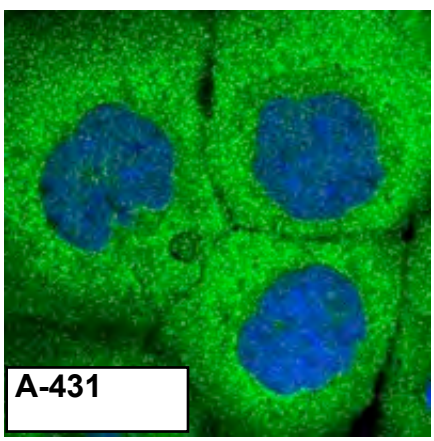
Calcyclin-1 (CAB040549)



Immunohistochemistry

IHC protocol: HIER pH 6, Dilution 1:75000
IHC test staining: Cytoplasmic and nuclear staining in many tissues. High expression in, eg intestine, basal cells in prostate and leydig cells. Tumors seems to be over expressing the protein.

IHC Annotators comments
Most normal tissues showed moderate nuclear and cytoplasmic positivity. Lung, stomach, exocrine pancreas, urothelia, leydig cells and a subset of lymphoid cells showed strong positivity. Cells in CNS, islet cells, hepatocytes, prostate, parathyroid glands and muscle tissues were weakly stained or negative.
Most malignant tissues showed weak to moderate nuclear and cytoplasmic positivity. Several urothelial and colorectal cancers along with a few pancreatic cancers exhibited strong immunoreactivity. Malignant lymphomas, prostate, breast and testicular cancers along with several hepatocellular carcinomas and endometrial cancers were negative.



Immunofluorescence

IF Overlay: antibody (green), anti-tubuline (red) and DAPI (blue)
IF Localisation: Staining of cytoplasm in all three cell lines. Additional staining of nuclear membrane in A-431.
IF Validation: Subcellular localization supported by literature.

Western blot

WB Size markers (kDa): 250, 130, 95, 72, 55, 36, 28, 17, 11
WB Lanes: Marker(1), RT-4(2), U251 MG(3), Plasma(4), Liver(5), Tonsil(6)
WB Target weight (kDa): 10
WB Validation: Supportive - Band of predicted size in kDa (+/-20%) with additional bands present.