CELL APPLICATIONS, INC.

Calretinin Antibody

Cat. No. CA1015

Applications:	**WB, IHC**
Detected MW:	**29 kDa**
Species & Reactivity:	**Human, Rat**
Isotype:	**Rabbit IgG**

BACKGROUND

Calretinin is a 29 kDa vitamin D-dependent calcium-binding protein and a member of the family to EF-hand proteins, to which S-100 also belongs. Its function is thought to be to buffer intracellular calcium and involved in calcium signaling. Calretinin has a general neuronal localization and is a predominantly cytosolic protein. Calretinin has an important role in the organization and functioning of the central nervous system. It is often postulated that the presence of calretinin correlates with an increased survival ability of cells under pathological conditions connected with increased intracellular calcium levels.[1] Calretinin is both: sensory protein, regulating intracellular processes, and buffer protein, maintaining proper calcium concentration in neurons. Calretinin modifies presynaptic transmission and interacts with microtubules and intermediate filaments of cytoskeleton. Calretinin plays an important role in neuron survival rate and maintaining homeostasis of calcium ions. It is a regulator of calcium-dependent processes and ion channels. Physiological functions of Calretinin are not fully explained. It is believed that Calretinin is involved in synaptic plasticity and neuroprotection, controlling calcium ion concentration, and in this way modulating neuron activity. Dopaminergic neurons are protected from the degeneration by Calretinin in Parkinson's disease. Moreover, this protein is a good immunocytochemical marker of tumours.[2] To date, Calretinin is a well-established immunohistochemical marker for malignant mesothelioma. Calretinin in human serum and plasma might be a useful marker for the diagnosis of malignant mesothelioma, alone or combined with other markers such as soluble mesothelin.[3]

References:

1. Billing-Marczak, K. & Kuznicki, J.: Pol. J. Pharmcol. 51:173-8, 1999
2. Lugli, A. et al: Hum. Path. 34:994-1000, 2003
3. Maeda, M. & Hino, O.: Path. Int. 56:649-54, 2006

TECHNICAL INFORMATION

Source:
Calretinin Antibody is a rabbit antibody raised against a short peptide from human Calretinin sequence.

Specificity and Sensitivity:
This antibody detects endogenous levels of calretinin proteins without cross-reactivity with other family members.

Storage Buffer: PBS and 30% glycerol

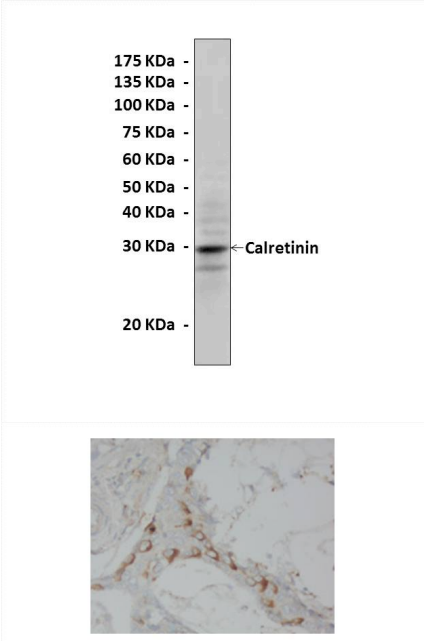
Storage:
Store at -20°C for at least one year. Store at 4°C for frequent use. Avoid repeated freeze-thaw cycles.

APPLICATIONS

Application:	*Dilution:
WB	1:1000
IP	n/d
IHC	1:50-200
ICC	n/d
FACS	n/d

**Optimal dilutions must be determined by end user.*

QUALITY CONTROL DATA



Top: Western Blot detection of Calretinin proteins in HeLa cell lysate using Calretinin Antibody. **Bottom:** This antibody stains paraffin-embedded human breast cancer tissue in immunohistochemical analysis.