

Calcium Binding Protein

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Calcium binding proteins play a crucial role in the regulation of intracellular calcium levels and are involved in a wide range of cellular processes, including muscle contraction, neurotransmitter release, gene expression, and cell proliferation and differentiation. Dysregulation of calcium signaling pathways has been implicated in various diseases, such as cancer, cardiovascular disease, and neurological disorders. Therefore, understanding the structure and function of calcium binding proteins is critical for developing new therapeutic strategies for these diseases. Moreover, calcium binding proteins can be used as targets for drug screening, and their expression levels can serve as biomarkers for disease diagnosis and prognosis. (*Bioessays*. 2002, *Adv Exp Med Biol*. 2020)

Calcium Binding Protein Related Products

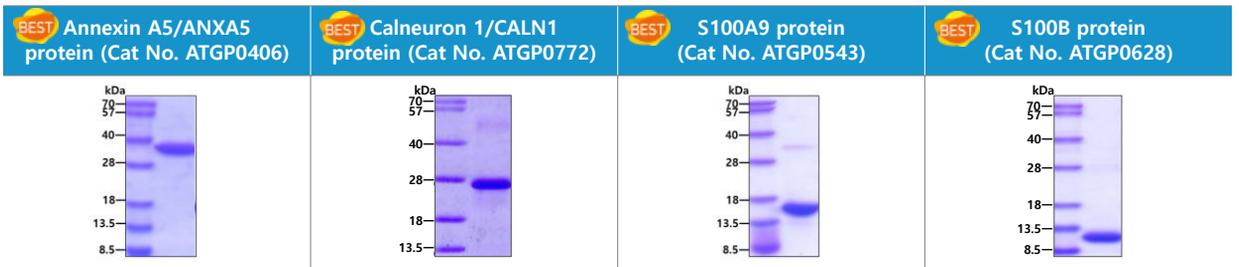
• Recombinant Proteins

*All the products use the *E.coli* expression system.

Product name	Species	Tagging	Cat No.
AIF-1/IBA1	H	His	ATGP1006
BEST Annexin A1/ANXA1	H	Non	ATGP0291
	M	His	ATGP2995
	H	His	ATGP0467
Annexin A2/ANXA2	H	His	ATGP0467
Annexin A3/ANXA3	H	Non	ATGP0453
Annexin A4/ANXA4	H	Non	ATGP0463
BEST Annexin A5/ANXA5	H	Non	ATGP0406
	M	His	ATGP3060
Annexin A6/ANXA6	H	His	ATGP0459
Annexin A7/ANXA7	H	His	ATGP1407
Annexin A8/ANXA8	H	His	ATGP0682
Annexin A8-like protein1/ANXA8L1	H	His	ATGP1598
Annexin A10/ANXA10	H	His	ATGP1420
Annexin A11/ANXA11	H	His	ATGP0771
Annexin A13/ANXA13	H	His	ATGP1014
CAB39	H	His	ATGP0617
CAB39L	H	His	ATGP1926
CABP7	H	His	ATGP1031
Calbindin 1/CALB1	H	Non	ATGP0381
Calbindin 2/CALB2	H	His	ATGP0694
Calceineurin A/PPP3CA	H	His	ATGP0861
Calceineurin B/PPP3R1	H	His	ATGP0901
Calceineurin B2/PPP3R2	H	His	ATGP0989
CALML3	H	His	ATGP1858
Calmodulin 2/CALM2	H	Non	CAM0801
Calneuron 1/CALN1	H	His	ATGP0772
Calreticulin/CALR	H	His	ATGP0542
Calreticulin 3/CALR3	H	Non	ATGP2573(D)
Calsequestrin 2/CASQ2	H	His	ATGP0502
CAMK2N1	H	His	ATGP2567
	M	His	ATGP3556
CAMK2N2	H	His	ATGP2776
CAMK4	H	His	ATGP1379
CGREF1	H	His	ATGP2921
CHP1	H	His	ATGP0597
Cornulin/CRNN	H	His	ATGP0497
CPPED1	H	His	ATGP2148
HPCAL1	H	His	ATGP0716
Parvalbumin alpha/PVALB	H	His	ATGP0779

Product name	Species	Tagging	Cat No.
Peffin/PEF1	H	His	ATGP0905
Regucalcin/RGN	H	His	ATGP1187(D)
S100A1	M	His	ATGP1089
S100A2	H	His	ATGP0949
S100A3	H	His	ATGP1078
	M	His	ATGP1652
BEST S100A4	H	His	ATGP0319
	M	His	ATGP1080
S100A5	H	His	ATGP0957
	M	His	ATGP1510
S100A6	H	His	ATGP0967
	M	His	ATGP1092
BEST S100A7	H	His	ATGP0991
	H	Non	ATGP0524
BEST S100A8	H	His-Myc	ATGP3372
	M	His	ATGP1085
BEST S100A9	H	His	ATGP0543
	M	His	ATGP1120
S100A10	H	His	ATGP0958
	M	His	ATGP3228
S100A11	H	His	ATGP0968
S100A13	H	His	ATGP0995
S100A14	H	His	ATGP0969
S100A15	M	His	ATGP1611
S100A16	H	His	ATGP1018
BEST S100B	H	His	ATGP0628
	H	Non	ATGP3314
	M	His	ATGP0608
	M	Non	ATGP3473
S100P	H	His	ATGP0565
S100Z	H	His	ATGP0588
Sentan/SNTN	H	His	ATGP1043
Synaptotagmin-1	H	His	ATGP1091
Synaptotagmin-3	H	His	ATGP2637(D)
Synaptotagmin-4	H	His	ATGP1982
Synaptotagmin-5	H	His	ATGP2390
Synaptotagmin-11	H	His	ATGP3165
Synaptotagmin-13	H	His	ATGP2203

H : Human M : Mouse D : Denature form



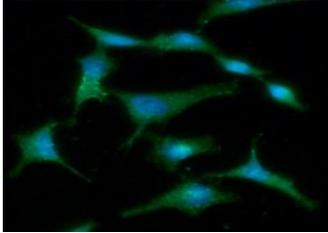
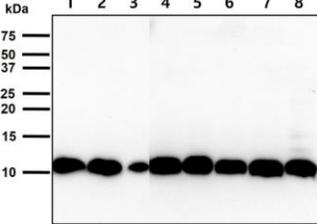
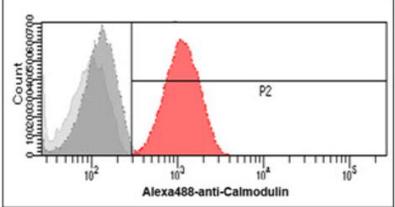
SDS-PAGE Load 3µg by SDS-PAGE under reducing condition and visualized by coomassie blue stain.

Calcium Binding Protein

• Monoclonal Antibodies

	Product name	Clone No.	Applications	Isotype	Host	Cat No.
BEST	Annexin A1/ANXA1	AT2G5	ELISA, WB	IgG _{1,k}	M	ATGA0336
	Calbindin 2/CALB2	AT5C5	ELISA, WB, ICC/IF	IgG _{1,k}	M	ATGA0435
	Calcineurin A/PPP3CA	AT1E11	ELISA, WB, ICC/IF	IgG _{2b,k}	M	ATGA0505
	Calmodulin 2/CALM2	J4D8	ELISA, WB, ICC/IF, FACS	IgG _{2a,k}	M	ACA0830
	Calsequestrin 2/CASQ2	AT4E10	ELISA, WB, ICC/IF	IgG _{1,k}	M	ATGA0202
BEST	S100A4	AT1C3	ELISA, WB, ICC/IF	IgG _{2b,k}	M	ATGA0384
	S100A11	AT20D11	ELISA, WB, ICC/IF, FACS	IgG _{1,k}	M	ATGA0434

M : Mouse

BEST S100A4 antibody (AT1C3) (Cat No. ATGA0384)	S100A11 antibody (AT20D11) (Cat No. ATGA0434)	Calmodulin 2/CALM2 antibody (J4D8) (Cat No. ACA0830)
		
ICC/IF ICC/IF analysis S100A4 in A549 cells. The cell was stained with S100A4 antibody (1:100). The secondary antibody (green) was used Alexa Fluor 488. DAPI is stained the cell nucleus (blue).	Western blot The cell lysates (40µg) were resolved by SDS-PAGE, transferred to PVDF membrane and probed with anti-human S100A11 antibody (1:1000). Proteins were visualized using a goat anti-mouse secondary antibody conjugated to HRP and an ECL detection system.	Flow cytometry Flow cytometry analysis of Calmodulin 2 in HeLa cells. The cell was stained with Calmodulin 2/CALM2 antibody at 2-5µg for 1x10 ⁶ cells (red). A Goat anti mouse IgG (Alexa fluor 488) was used as the secondary antibody. Mouse monoclonal IgG was used as the isotype control (dark gray), cells without incubation with primary and secondary antibody was used as the negative control (light gray).

Publications

[Annexin A1/ANXA1, S100A7]

Jung SH, et al. Integrative proteomic profiling of protein activity and interactions using protein arrays. *Mol Cell Proteomics*. 2012 Nov;11(11):1167-76. [PMID: 22843993]

Jung SH, et al. Identification of transglutaminase 2 kinase substrates using a novel on-chip activity assay. *Biosens Bioelectron*. 2016 Aug 15;82:40-8. [PMID: 27040940]

Jung SH, et al. Systematic investigation of protein kinase A substrate proteins using on-chip protein kinase kinetic profiling. *Analyst*. 2017 Jun 12;142(12):2239-2246. [PMID: 28536714]

[S100A9]

Suzuki S, et al. CD147 expression correlates with lymph node metastasis in T1-T2 squamous cell carcinoma of the tongue. *Oncol Lett*. 2017 Oct;14(4):4670-4676. [PMID: 29085466]

[S100P]

Chiba M, et al. Novel quantitative analysis of the S100P protein combined with endoscopic ultrasound-guided fine needle aspiration cytology in the diagnosis of pancreatic adenocarcinoma. *Oncol Rep*. 2017 Apr;37(4):1943-1952. [PMID: 28260012]

[S100A8, S100A9]

Kwon CH, et al. S100A8 and S100A9 promotes invasion and migration through p38 mitogen-activated protein kinase-dependent NF-κB activation in gastric cancer cells. *Mol Cells*. 2013 Mar;35(3):226-34. [PMID: 23456298]

Nishikawa Y, et al. Calprotectin Induces IL-6 and MCP-1 Production via Toll-Like Receptor 4 Signaling in Human Gingival Fibroblasts. *J Cell Physiol*. 2017 Jul;232(7):1862-1871. [PMID: 27925202]

Takagi R, et al. S100A9 Increases IL-6 and RANKL Expressions through MAPKs and STAT3 Signaling Pathways in Osteocyte-Like Cells. *Biomed Res Int*. 2020 Feb 19;2020:7149408. [PMID: 32149126]

[S100B]

Hosokawa K, et al. S100B impairs glycolysis via enhanced poly(ADP-ribose)ylation of glyceraldehyde-3-phosphate dehydrogenase in rodent muscle cells. *Am J Physiol Endocrinol Metab*. 2017 Jun 1;312(6):E471-E481. [PMID: 28174179]

Fujiya A, et al. The role of S100B in the interaction between adipocytes and macrophages. *Obesity (Silver Spring)*. 2014 Feb;22(2):371-9. [PMID: 23804363]