Synaptic Systems

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Calreticulin mutation CAL2

Cat.No. HS-315 111-S; Monoclonal mouse antibody, 100 µl purified IgG (lyophilized)

Data Sheet

Reconstitution/ Storage	100 µl purified IgG, lyophilized. Albumin and azide were added for stabilization. For reconstitution add 100 µl H_2O to get a 1mg/ml solution in PBS. Then aliquot and store at -20°C until use.
Applications	**IHC-P/FFPE**: 1 : 20 up to 1 : 40
Clone	CAL2
Subtype	IgG2a
Immunogen	Recombinant protein corresponding to the neoepitope in human mutated calreticulin.
Reactivity	Reacts with: human (P27797). Other species not tested yet.
Specificity	Specific for the neoepitope in mutated Calreticulin.

TO BE USED IN VITRO / FOR RESEARCH ONLY
NOT TOXIC, NOT HAZARDOUS, NOT INFECTIOUS, NOT CONTAGIOUS

Calreticulin (CALR) mutations have been identified as a major driver in **m**yelo**p**roliferative **n**eoplasms (MPNs). In contrast to JAK2 mutations that are mainly associated with **p**olycythaemia **v**era (PV), CALR mutations are specifically associated with **p**rimary **m**yelo**f**ibrosis (PMF) and **e**ssential **t**hrombocythaemia (ET).

All known types of CALR mutations result in a novel C-terminus of the protein. This harbors a common epitope expressed in all kinds of CALR mutations. The **CAL2** antibody is directed against this neoepitope. Therefore, it can be concluded that the CAL2 antibody is able to detect all CALR mutations.

It labels the megakaryocytes in myeloproliferative neoplasms (essential thrombocythaemia (ET) and primary myelofibrosis (PMF)) with CALR mutation and enables to distinguish them from polycythemia vera (PV), from CALR mutation negative ET and PMF and from reactive bone marrow.

Selected References SYSY Antibodies

A new monoclonal antibody (CAL2) detects CALRETICULIN mutations in formalin-fixed and paraffin-embedded bone marrow biopsies.
Stein H, Bob R, Dürkop H, Erck C, Kämpfe D, Kvasnicka HM, Martens H, Roth A, Streubel A
Leukemia (2016) 30(1): 131-5. **IHC-P; tested species: human**

Calreticulin mutation specific CAL2 immunohistochemistry accurately identifies rare calreticulin mutations in myeloproliferative neoplasms.
Mózes R, Gángó A, Sulák A, Vida L, Reiniger L, Timár B, Krenács T, Alizadeh H, Masszi T, Gaál-Weisinger J, Demeter J, et al.
Pathology (2018) : . **IHC-P; tested species: human**

CAL2 Immunohistochemical Staining Accurately Identifies CALR Mutations in Myeloproliferative Neoplasms.
Nomani L, Bodo J, Zhao X, Durkin L, Loghavi S, Hsi ED
American journal of clinical pathology (2016) 146(4): 431-8. **IHC-P; tested species: human**

Mutation specific immunohistochemistry is highly specific for the presence of calreticulin mutations in myeloproliferative neoplasms.
Andrici J, Farzin M, Clarkson A, Sioson L, Sheen A, Watson N, Toon CW, Koleth M, Stevenson W, Gill AJ
Pathology (2016) 48(4): 319-24. **IHC-P; tested species: human**

Selected General References

Somatic CALR mutations in myeloproliferative neoplasms with nonmutated JAK2.
Nangalia J, Massie CE, Baxter EJ, Nice FL, Gundem G, Wedge DC, Avezov E, Li J, Kollmann K, Kent DG, Aziz A, et al.
The New England journal of medicine (2013) 369(25): 2391-2405.

Somatic mutations of calreticulin in myeloproliferative neoplasms.
Klampfl T, Gisslinger H, Harutyunyan AS, Nivarthi H, Rumi E, Milosevic JD, Them NC, Berg T, Gisslinger B, Pietra D, Chen D, et al.
The New England journal of medicine (2013) 369(25): 2379-90.