

Anti-1-pHis [SC1-1] Standard Size Ab02384-23.0

Isotype and Format: Rabbit IgG, Kappa

Clone Number: SC1-1

Alternative Name(s) of Target: 1-phosphohistidine; N1-Phosphohistidine; histidine

UniProt Accession Number of Target Protein:

Published Application(s): functional assays, Immunoaffinity purification, IP, WB, IF

Published Species Reactivity: Species independent

Immunogen: The original rabbit version of this antibody was raised by immunizing rabbits with a 1-pTza library conjugated to the carrier protein keyhole limpet hemocyanin (KLH).

Specificity: This antibody is specific for 1-pHis and does not cross react with phosphotyrosine (pTyr) or the other pHis isomers.

Application Notes: This antibody can be used for the identification of 1-pHis substrates and functional study of pHis. It was used to assess pHis levels in lysates of various cell lines, such as HPDE6 and pancreatic cancer, FLAG-NME1 293, HeLa, C2C12, and NME1- and NME2-overexpressing (OE) melanoma cell lines via Western blot (Fuhs et al, 2015; pmid: 26140597). A dot blot was also performed on rabbit antisera, the 1-pTza, 3-pTza peptide libraries, His control library and a pTyr peptide with this antibody demonstrating the antibody's specificity to 1-pHis (Fuhs et al, 2015; pmid:26140597). Phosphorylation of H118 on NDPK-B was assessed as well by immunoblotting with this antibody (Panda et al, 2016; pmid:27453048). SC1-1 was further used to identify the intracellular location of pHis in HeLa cells via immunofluorescence. This clone was shown to be useful for studies on the acidic compartments (i.e., phagosomes, autophagosomes, and lysosomes) since staining is absent from the interior of these acidic compartments and often very bright in the surrounding regions (Fuhs et al, 2015; pmid:26140597). Another group detected 1-pHis in SK-N-SH cells by immunofluorescence staining with this antibody (Adam et al, 2020; pmid:32392889). Furthermore, immunoaffinity purification (IAP) columns, containing protein A crosslinked with this antibody. The samples used were SK-N-BE(2) xenograft tumors from mice (Adam et al, 2020; pmid:32392889). Finally, this clone was also utilized to immunoprecipitate proteins extracted from 10 × 10⁶ SK-N-BE(2) and SK-N-AS neuroblastoma cells (Adam et al, 2020; pmid:32392889).

Antibody First Published in: Fuhs et al. Monoclonal 1- and 3-Phosphohistidine Antibodies: New Tools to Study Histidine Phosphorylation Cell. 2015 Jul 2; 162(1): 198-210. [PMID:26140597](#)

Note on publication: Describes the generation and characterization of the monoclonal antibodies (mAbs) that specifically recognize 1-pHis or 3-pHis.

Product Form

Size: 200 µg Purified antibody.

Purification: Protein A affinity purified

Supplied In: PBS with 0.02% Proclin 300.

Storage Recommendation: Store at 4°C for up to 3 months. For longer storage, aliquot and store at -20°C.

Concentration: 1 mg/ml.

Important note – This product is for research use only. It is not intended for use in therapeutic or diagnostic procedures for humans or animals.