SANTA CRUZ BIOTECHNOLOGY, INC.

HA-Tag (4C12): sc-57594

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Plasmid vectors for the expression of coding regions of eukaryotic genes in bacterial, insect and mammalian hosts are in common usage; such expression vectors are frequently used to encode hybrid fusion proteins consisting of a eukaryotic target protein and a specialized region designed to aid in the purification and visualization of the target protein. For example, the pCDM8 expression vector and derivatives thereof encode fusions between the target protein and an 11 amino acid peptide derived from the influenza protein hemagglutinin (HA). The HA epitope tag is useful in Western blotting and immunohistochemical localization of expressed fusion proteins when examined with antibodies raised specifically against the HA-epitope tag.

REFERENCES

1. Maniattis, T., et al. 1982. Molecular Cloning. Cold Spring Harbor, New York: Cold Spring Laboratory Press.
2. Smith, D.B. and Johnson, K.S. 1988. Single-step purification of polypeptides expressed in *Escherichia coli* as fusions with glutathione S-transferase. Gene 67: 31-40.
3. Hopp, T.P., et al. 1988. A short polypeptide marker sequence useful for recombinant protein identification and purification. Nat. Biotechnol. 6: 1204-1210.
4. Kieffer, B.L. 1991. Optimised cDNA size selection and cloning procedure for the construction of representative plasmid cDNA libraries. Gene 109: 115-119.
5. Chen, Y.T., et al. 1993. Expression and localization of two low molecular weight GTP-binding proteins, Rab8 and Rab10, by epitope tag. Proc. Natl. Acad. Sci. USA 90: 6508-6512.
6. Kroll, D.J., et al. 1993. A multifunctional prokaryotic protein expression system: overproduction, affinity purification, and selective detection. DNA Cell Biol. 12: 441-453.

SOURCE

HA-Tag (4C12) is a mouse monoclonal antibody raised against wall antigens from the mycelial form of a common *C. albicans* serotype A laboratory strain (ATCC 26555).

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

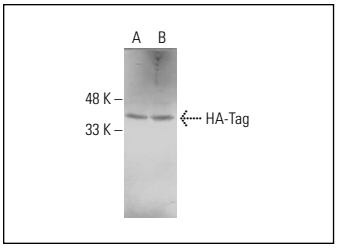
APPLICATIONS

HA-Tag (4C12) is recommended for detection of proteins containing the HA Tag by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)] and immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

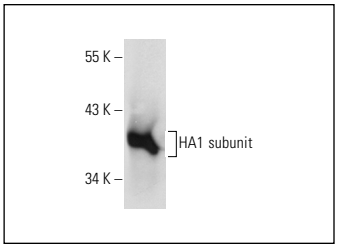
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



HA-Tag (4C12): sc-57594. Western blot analysis of HA-Tag expression in rHA1 *E. coli* lysate (**A**) and purified rHA1 (**B**).



HA-Tag (4C12): sc-57594. Western blot analysis of recombinant HA1 subunit of viral HSN1.

SELECT PRODUCT CITATIONS

1. Otaegi, G., et al. 2006. Modulation of the PI 3-kinase-Akt signalling pathway by IGF-I and PTEN regulates the differentiation of neural stem/precursor cells. J. Cell Sci. 119: 2739-2748.
2. García, J. 2011. The calcium channel α2/δ1 subunit interacts with ATP5b in the plasma membrane of developing muscle cells. Am. J. Physiol., Cell Physiol. 301: C44-C52.
3. Liu, X., et al. 2018. β4GalT1 mediates PPARγ N-glycosylation to attenuate microglia inflammatory activation. Inflammation 41: 1424-1436.
4. Zeng, J., et al. 2019. TRIM9-mediated resolution of neuroinflammation confers neuroprotection upon ischemic stroke in mice. Cell Rep. 27: 549-560.
5. Zoltner, M., et al. 2020. Suramin exposure alters cellular metabolism and mitochondrial energy production in African trypanosomes. J. Biol. Chem. 295: 8331-8347.
6. Zeng, G., et al. 2022. Comprehensive interactome analysis for the sole adenylyl cyclase Cyr1 of *Candida albicans*. Microbiol. Spectr. 10: e0393422.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

CONJUGATES

See **HA-Tag (F-7): sc-7392** for HA-Tag antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor® 488, 546, 594, 647, 680 and 790.