SANTA CRUZ BIOTECHNOLOGY, INC.

NY-ESO-1 (N-12): sc-15889

BACKGROUND

NY-ESO-1 (also known as autoimmunogenic cancer/testis antigen) is a tumor-specific shared antigen with distinctive immunogenicity. NY-ESO-1 is a member of the cancer/testis (CT) family of human tumor-associated antigens. NY-ESO-1 is an attractive candidate tumor antigen for the development of immunotherapy for a wide variety of cancers. NY-ESO-1 is expressed in multiple types of tumors, but its normal tissue distribution is primarily limited to the testes and ovaries. In addition, NY-ESO-1 elicits frequent antibody responses in cancer patients that are accompanied by strong $CD8^+$ T cell responses against HLA-A2-restricted epitopes. Therefore, both humoral and cellular immune responses can be mounted against NY-ESO-1.

REFERENCES

1. Schultz-Thater, E., et al. 2000. NY-ESO-1 tumour associated antigen is a cytoplasmic protein detectable by specific monoclonal antibodies in cell lines and clinical specimens. Br. J. Cancer 83: 204-208.
2. Gnjatic, S., et al. 2000. Strategy for monitoring T cell responses to NY-ESO-1 in patients with any HLA class I allele. Proc. Natl. Acad. Sci. USA 97: 10917-10922.
3. Zeng, G., et al. 2001. $CD4^+$ T cell recognition of MHC class II-restricted epitopes from NY-ESO-1 presented by a prevalent HLA DP4 allele: association with NY-ESO-1 antibody production. Proc. Natl. Acad. Sci. USA 98: 3964-9396.
4. Chen, C.H., et al. 2001. Expressions of cancer-testis antigens in human hepatocellular carcinomas. Cancer Lett. 164: 189-195.
5. Jager, D., et al. 2001. Vaccination for malignant melanoma: recent developments. Oncology 60: 1-7.
6. Bownds, S., et al. 2001. Induction of tumor-reactive cytotoxic T lymphocytes using a peptide from NY-ESO-1 modified at the carboxy-terminus to enhance HLA-A2.1 binding affinity and stability in solution. J. Immunother. 24: 1-9.

CHROMOSOMAL LOCATION

Genetic locus: CTAG1B/CTAG1A (human) mapping to Xq28.

SOURCE

NY-ESO-1 (N-12) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of NY-ESO-1 of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-15889 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

APPLICATIONS

NY-ESO-1 (N-12) is recommended for detection of NY-ESO-1 and LAGE-2A of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Molecular Weight of NY-ESO-1: 22 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

SELECT PRODUCT CITATIONS

1. Cronwright, G., et al. 2005. Cancer/testis antigen expression in human mesenchymal stem cells: down-regulation of SSX impairs cell migration and matrix metalloproteinase 2 expression. Cancer Res. 65: 2207-2215.
2. Batchu, R.B., et al. 2005. Protein transduction of dendritic cells for NY-ESO-1-based immunotherapy of myeloma. Cancer Res. 65: 10041-10049.
3. Goodyear, O., et al. 2005. $CD8^+$ T cells specific for cancer germline gene antigens are found in many patients with multiple myeloma, and their frequency correlates with disease burden. Blood 106: 4217-4224.

RESEARCH USE

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

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.