PN IM2750 Monoclonal Antibody NKG2A (within NKG2A / CD94 complex)

Form	Unconjugated	**Clone**	Z199
Quantity	0.2 mg	**Isotype**	IgG2b
Presentation	Freeze-dried	**Species**	Mouse

For Research Use Only. Not for use in diagnostic procedures.

2. Never pipet by mouth and avoid contact of samples with skin and mucous membranes.
3. Do not use reagent beyond the expiration date on the vial label.
4. Avoid microbial contamination of reconstituted reagent or erroneous results may occur.
5. Use Good Laboratory Practices (GLP) when handling this reagent.

SELECTED RESEARCH REFERENCES

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2. [4858] Yokoyama, W.M., "Natural Killer cell receptors",1998, Curr. Opin. Immunol.,10, 298-305
3. [4859] Moretta, A., Biassoni, R., Bottino, C., Pende, D., Vitale, M., Poggi, A., Mingari, M.C., Moretta, L., "Major histocompatibility complex class I-specific receptors on human natural killer and T-lymphocytes", 1997, Immunol. Rev.,155, 105-117
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6. [3308] Pérez-Villar, J.J., Melero, I., Navarro, F., Carretero, M., Bellon, T., Llano, M., Colonna, M., Geraghty, D.E., Lopez-Botet, M., "The CD94 / NKG2-A inhibitory receptor complex is involved in natural killer cell-mediated recognition of cells expressing HLA-G1", 1997, J. Immunol., 12, 158, 5736-5743.
7. [4860] Pende, D., Silvori, S., Accame, L., Pareti, L., Falco, M., Le Bouteiller, P., Moretta, L., Moretta, A., "HLA-G recognition by human natural killer cells. Involvement of CD94 both as inhibitory and as activating receptor complex", 1997, Eur. J. Immunol.,27, 1875-1880.
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9. [4868] Lee, N., Llano, M., Carretero, M., Ishitani, A., Navarro, F., Lopez-Botet, M., Geraghty, D.E., "HLA-E is ligand for the natural killer inhibitory receptor CD94 / NKG2A", 1998, Proc. Natl. Acad. Sci., 95, 5199-5204
10. [3439] Mingari, M.C., Ponte, M., Cantoni, C., Vitale, C., Schiavetti, F., Bertone, S., Bellomo, R., Cappai, A.T., Biassoni, R., "HLA-class I – specific inhibitory receptors in human cytolytic T lymphocytes: molecular characterization, distribution in lymphoid tissues and co-expression by individual T cells", 1997, Int. Immunol., 4, 9, 485 491.

(*): See SUGGESTED PROCEDURE for tested application(s)
For other application(s), see the corresponding reference(s).

PN IM2750 Monoclonal Antibody NKG2A (within NKG2A / CD94 complex)

Form	Unconjugated	**Clone**	Z199
Quantity	0.2 mg	**Isotype**	IgG2b
Presentation	Freeze-dried	**Species**	Mouse

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SPECIFICITY

NKG2A is a type II transmembrane glycoprotein of 43 kDa, belonging to the Ca^{++}–dependent (C-type) lectin family, like CD94 (1, 2, 3). NKG2A associates with CD94 to form a disulphide-linked, inhibitory NK cell receptor for MHC class I molecules, with a broader specificity than the human killer cell inhibitory (KIR) / activatory (KAR) receptors of the Ig-super-family type (4, 5). The intracellular portion of NKG2A contains two characteristic immunoreceptor tyrosine – based inhibition motifs (ITIM) involved in the transduction of the inhibitory signal (4, 5). It has been first suggested that the NKG2A / CD94 inhibitory receptor complex was involved in NK cell – mediated recognition of cells expressing HLA-G (6, 7), but recent studies strongly indicate that NKG2A / CD94 is rather recognizing HLA-E, another non-classical MHC class I molecule (8, 9). The NKG2A / CD94 complex is expressed on subsets of NK cells, T cells and thymocytes (3, 10).

The Z199 monoclonal antibody (mAb) immuno-precipitates a 43 kDa protein corresponding to the NKG2A protein (5). This antibody usually reacts with $CD94^{brigth}$ NK cells, expressing the NKG2A / CD94 inhibitory receptor complex (4). It does not recognize the activatory form of CD94 which corresponds to the association of CD94 with another member of the NKG2 gene family. The Z199 mAb restores the ability of $CD94^{bright}$– NK clones to lyse HLA-class I protected target cells (4, 5).

REAGENT

Anti – NKG2A unconjugated monoconal antibody
PN IM2750 – 0.2 mg freeze-dried – 10 µL / test*

CLONE
Z199

HYBRIDOMA
P3U1 x Balb/c

IMMUNOGEN
NK – cell clone

Ig CHAIN
IgG2b

SPECIES
Mouse

SOURCE
Ascites fluid

PURIFICATION
Ion exchange or affinity chromatography

POTENTIAL APLICATIONS*

Flow cytometry (4, 5, 6, 7, 10).
Immunoprecipitation (4, 5).
Cytotoxicity assays (4, 5, 6, 10).

BUFFER

1 mg/mL bovine serum albumin in phosphate-buffered saline.

STORAGE CONDITIONS AND STABILITY

This freeze-dried form may be stored at 2–8°C until the expiration date stated on the vial label.
No preservative has been added.

REAGENT PREPARATION

Depending of usage, reconstitute with 1 mL of distilled water, with or without 0.1% sodium azide (w/v).
The reconstituted form including 0.1% sodium azide may be stored for up to one month at 2–8°C.
The reconstituted form without sodium azide can be stored at -20°C or less, until the expiration date stated on the vial label.
In this case, aliquotting is recommended to avoid multiple freezing / thawing cycles.

SUGGESTED PROCEDURE

Flow Cytometry: Use 2 µg of primary antibody (10 µL of the recommended reconstituted form) per 5 x 10^5 cells in one test, or per 100 µL of whole blood.

STATEMENT OF WARNINGS

1. Specimens, samples and all material coming in contact with them should be handled as if capable of transmitting infection and disposed of with proper precautions.

(*): See SUGGESTED PROCEDURE for tested application(s)
For other application(s), see the corresponding reference(s).

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