SANTA CRUZ BIOTECHNOLOGY, INC.

ILT-4 (h): 293T Lysate: sc-115693

BACKGROUND

Leukocyte immunoglobulin-like receptors (ILTs, also known as LIRs) are members of the immunoglobulin superfamily of glycoproteins and are predominantly expressed by monocytes, B cells, dendritic cells, natural killer (NK) cells, peripheral blood leukocytes and tissues such as placenta, lung and liver. There are several members of the ILT family, including ILT-1, ILT-2, ILT-3, ILT-4, ILT-5, ILT-6, ILT-7, ILT-8, ILT-11, LIR-6 and LIR-8. These ILT proteins are divided into two subfamiles, namely subfamily A (ILT-1, ILT-6, ILT-7, ILT-8, ILT-11 and LIR-6) and subfamily B (ILT-2, ILT-3, ILT-4, ILT-5 and LIR-8), the former of which function as stimulating receptors and the latter of which function as inhibitory receptors. Characteristically, members of subfamily A have transmembrane regions containing a charged arginine residue through which they initiate stimulatory cascades, while members of subfamily B contain cytoplasmic immunoreceptor tyrosine-based inhibitory motifs (ITIMs) through which they induce inhibitory signaling cascades.

REFERENCES

1. Samaridis, J., et al. 1997. Cloning of novel immunoglobulin superfamily receptors expressed on human myeloid and lymphoid cells: structural evidence for new stimulatory and inhibitory pathways. Eur. J. Immunol. 27: 660-665.
2. Cosman, D., et al. 1997. A novel immunoglobulin superfamily receptor for cellular and viral MHC class I molecules. Immunity 7: 273-282.
3. Colonna, M., et al. 1997. A common inhibitory receptor for major histocompatibility complex class I molecules on human lymphoid and myelo-monocytic cells. J. Exp. Med. 186: 1809-1818.
4. André, P., et al. 2001. New nomenclature for MHC receptors. Nat. Immunol. 2: 661.
5. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 604811. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
6. Foster, C.E., et al. 2003. Crystal structure of the human natural killer (NK) cell activating receptor NKp46 reveals structural relationship to other leukocyte receptor complex immunoreceptors. J. Biol. Chem. 278: 46081-46086.
7. Shiroishi, M., et al. 2003. Human inhibitory receptors Ig-like transcript 2 (ILT-2) and ILT-4 compete with CD8 for MHC class I binding and bind preferentially to HLA-G. Proc. Natl. Acad. Sci. USA 100: 8856-8861.

CHROMOSOMAL LOCATION

Genetic locus: LILRB2 (human) mapping to 19q13.42.

PRODUCT

ILT-4 (h): 293T Lysate represents a lysate of human ILT-4 transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

APPLICATIONS

ILT-4 (h): 293T Lysate is suitable as a Western Blotting positive control for human reactive ILT-4 antibodies. Recommended use: 10-20 µl per lane.

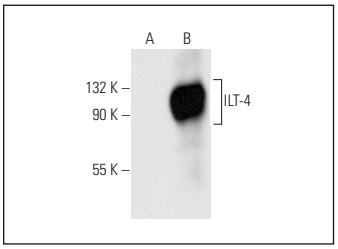
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

ILT (D-6): sc-166549 is recommended as a positive control antibody for Western Blot analysis of enhanced human ILT-4 expression in ILT-4 transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

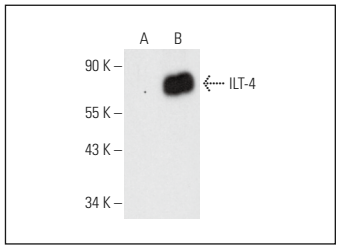
RECOMMENDED SUPPORT REAGENTS

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.

DATA



ILT (D-6): sc-166549. Western blot analysis of ILT-4 expression in non-transfected: sc-117752 (**A**) and human ILT-4 transfected: sc-115693 (**B**) 293T whole cell lysates.



ILT (A-9): sc-166580. Western blot analysis of ILT-4 expression in non-transfected: sc-117752 (**A**) and human ILT-4 transfected: sc-115693 (**B**) 293T whole cell lysates.

RESEARCH USE

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

PROTOCOLS

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