

ILT-4/5 (F-7): sc-390287

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 subfamilies, 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. and Colonna, M. 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 myelomonocytic 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. Nakajima, H., et al. 2003. Transcriptional regulation of ILT family receptors. *J. Immunol.* 171: 6611-6620.
8. Shiroishi, et al. 2003. Human inhibitory receptors Ig-like transcript 2 (ILT2) and ILT4 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/LILRB3/LILRB5 (human) mapping to 19q13.42.

SOURCE

ILT-4/5 (F-7) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 571-601 within a C-terminal cytoplasmic domain of ILT-4 of human origin.

PRODUCT

Each vial contains 200 µg IgG₃ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-390287 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

ILT-4/5 (F-7) is recommended for detection of ILT-4, ILT-5 and LIR-8 of human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], 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 ILT-4/5: 95 kDa.

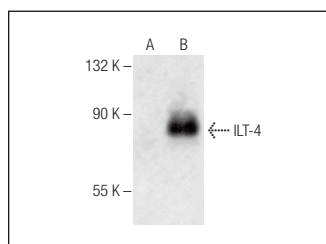
Positive Controls: ILT-4 (h): 293T Lysate: sc-115693.

RECOMMENDED SUPPORT REAGENTS

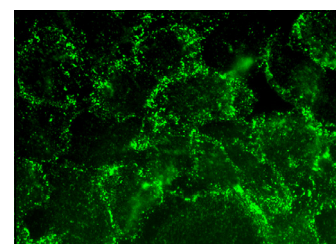
To ensure optimal results, the following support reagents are recommended:

- 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



ILT-4/5 (F-7): sc-390287. 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-4/5 (F-7): sc-390287. Immunofluorescence staining of formalin-fixed A-431 cells showing membrane localization.

STORAGE

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

RESEARCH USE

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