SANTA CRUZ BIOTECHNOLOGY, INC.

PILR-α (T-14): sc-104618

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The Power to Question

BACKGROUND

PILR-α [paired immunoglobulin (Ig)-like type 2 receptor α], also known as FDF03, is a member of the paired Ig-like type 2 receptor family and is predominantly expressed in hemopoietic tissues but is also found in macrophages, monocytes, granulocytes and dendritic cells. Typically consisting of two highly related but functionally opposite (inhibiting and activating) receptors, paired receptors play an important role in the regulation of the immune system and in the recognition of the sialylated O-glycosylated ligand MIC2. PILR-α is the inhibitory component of the paired Ig-like type 2 receptor and PILR-β is the activating component. PILR-α contains an immune receptor tyrosine-based inhibitory motif (ITIM) which mediates the recruitment of a phosphatase for the inhibition of immune responses. Due to alternative splicing events, four isoforms exist for PILR-α. Isoforms 1 and 2 are single-pass type I membrane proteins and localize to the cell membrane, while isoforms 3 and 4 are secreted proteins.

REFERENCES

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2. Mousseau, D.D., et al. 2000. PILR-α, a novel immunoreceptor tyrosine-based inhibitory motif-bearing protein, recruits SHP-1 upon tyrosine phosphorylation and is paired with the truncated counterpart PILR-β. J. Biol. Chem. 275: 4467-4474.
3. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 605341. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
4. Velten, F.W., et al. 2004. A gene signature of inhibitory MHC receptors identifies a BDCA3+ subset of IL-10-induced dendritic cells with reduced allostimulatory capacity *in vitro*. Eur. J. Immunol. 34: 2800-2811.
5. Shiratori, I., et al. 2004. Activation of natural killer cells and dendritic cells upon recognition of a novel CD99-like ligand by paired immunoglobulin-like type 2 receptor. J. Exp. Med. 199: 525-533.
6. Wilson, M.D., et al. 2006. Comparative analysis of the paired immunoglobulin-like receptor (PILR) locus in six mammalian genomes: duplication, conversion, and the birth of new genes. Physiol. Genomics 27: 201-218.
7. Satoh, T., et al. 2008. PILR-α is a herpes simplex virus-1 entry coreceptor that associates with glycoprotein B. Cell 132: 935-944.
8. Tabata, S., et al. 2008. Biophysical characterization of O-glycosylated CD99 recognition by paired Ig-like type 2 receptors (PILR). J. Biol. Chem. 283: 8893-8901.
9. Tabata, S., et al. 2008. Expression, crystallization and preliminary X-ray diffraction analysis of human paired Ig-like type 2 receptor α (PILR-α). Acta Crystallogr. Sect. F Struct. Biol. Cryst. Commun. 64: 44-46.

STORAGE

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

CHROMOSOMAL LOCATION

Genetic locus: Pilra (mouse) mapping to 5 G2.

SOURCE

PILR-α (T-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an extracellular domain of PILR-α of mouse 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-104618 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

PILR-α (T-14) is recommended for detection of PILR-α of mouse and rat 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).

Suitable for use as control antibody for PILR-α siRNA (m): sc-106411, PILR-α shRNA Plasmid (m): sc-106411-SH and PILR-α shRNA (m) Lentiviral Particles: sc-106411-V.

Molecular Weight of PILR-α: 44 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.

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.