



## Rae-1 (I-19): sc-55795

### BACKGROUND

Natural killer (NK) cells attack tumor and infected cells, but the receptors and ligands that stimulate them are poorly understood. Two murine ligands for the lectin-like receptor NKG2D, H60 and retinoic acid early inducible (Rae-1 $\alpha$ ,  $\beta$ ,  $\gamma$ ,  $\delta$  and  $\epsilon$ ), are distant relatives of major histocompatibility complex class I molecules. These molecules are encoded by Rae-1 and H60 minor histocompatibility antigen genes on mouse chromosome 10 and show weak homology with MHC class I. Expression of the NKG2D ligands is low or absent on normal, adult tissues; however, they are constitutively expressed on some tumors and upregulated by retinoic acid. Ectopic expression of Rae-1 and H60 confers target susceptibility to NK cell attack. NKG2D binds to H60 with approximately 25-fold higher affinity than to Rae-1. Rae-1 and H60 compete directly for occupancy of NKG2D; therefore, NKG2D can be occupied by only one ligand at a time. Additionally, Rae-1 and H60 ligands of the NKG2D receptor stimulate tumor immunity.

### REFERENCES

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### CHROMOSOMAL LOCATION

Genetic locus: RAET1E (human) mapping to 6q25.1; Raet1e (mouse) mapping to 10 A3.

### SOURCE

Rae-1 (I-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of Rae-1 $\epsilon$  of mouse origin.

### PRODUCT

Each vial contains 200  $\mu$ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-55795 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

### APPLICATIONS

Rae-1 (I-19) is recommended for detection of Rae-1 $\alpha$ , Rae-1 $\beta$ , Rae-1 $\gamma$ , Rae-1 $\delta$  and Rae-1 $\epsilon$  of mouse 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 mature Rae-1: 25 kDa.

Molecular Weight of Rae-1 precursor: 32 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.

### 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.

### PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.