

**DESCRIPTION**

**Source** Mouse myeloma cell line, NS0-derived  
Arg83-His495, with an N-terminal 6-His tag  
Accession # Q6ZMJ2

**N-terminal Sequence Analysis** His

**Predicted Molecular Mass** 45.9 kDa

**SPECIFICATIONS**

**SDS-PAGE** 66-75 kDa, reducing conditions

**Activity** Measured by its ability to bind fluorescein-conjugated *S. aureus* Bioparticles. Jiang, Y. *et al.* (2006) *J. Biol. Chem.* **281**:11834.  
The ED<sub>50</sub> for this effect is 0.4-2 µg/mL.

**Endotoxin Level** <0.10 EU per 1 µg of the protein by the LAL method.

**Purity** >85%, by SDS-PAGE under reducing conditions and visualized by silver stain.

**Formulation** Lyophilized from a 0.2 µm filtered solution in PBS. See Certificate of Analysis for details.

**PREPARATION AND STORAGE**

**Reconstitution** Reconstitute at 250 µg/mL in sterile PBS.

**Shipping** The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.

**Stability & Storage** Use a manual defrost freezer and avoid repeated freeze-thaw cycles.

- 12 months from date of receipt, -20 to -70 °C as supplied.
- 1 month, 2 to 8 °C under sterile conditions after reconstitution.
- 3 months, -20 to -70 °C under sterile conditions after reconstitution.

**BACKGROUND**

Scavenger receptor A5 (SCARA5) is also known as testis expressed scavenger receptor (Tsr). Class A scavenger receptors, including CL-P1, MARCO, SCARA3, and SR-A1, are type II transmembrane proteins that contain a collagenous stalk (1 - 3). Mature human SCARA5 consists of a 60 amino acid (aa) cytoplasmic domain, a 21 aa transmembrane segment, and a 414 aa extracellular domain (ECD) with a spacer, a collagen-like, and a scavenger receptor cysteine-rich (SRCR) domain (4 - 6). Within the ECD, human SCARA5 shares 87% aa sequence identity with mouse and rat SCARA5. It shares 23% - 34% aa sequence identity with CL-P1, MARCO, SCARA3, and SR-A1. Alternate splicing generates isoforms that lack the SRCR domain, the transmembrane segment, or the 225 aa spacer region between the membrane and the collagen-like domain (6). SCARA5 is a cell surface disulfide-linked homotrimer of > 250 kDa (5). It is highly expressed in testicular Sertoli and germ cells and more weakly in the epithelia of other tissues (4, 5). During mouse development, SCARA5 expression is attenuated in female embryos at the time of sex determination, whereas it is maintained in the developing testis (4). SCARA5 is re-expressed in the adult ovary (4). SCARA5 binds heat-killed bacterial particles but not yeast particles or modified LDL (5).

**References:**

1. Murphy, J.E. *et al.* (2005) *Atherosclerosis* **182**:1.
2. Mukhopadhyay, S. And S. Gordon (2004) *Immunobiology* **209**:39.
3. Sarrias, M.R. *et al.* (2004) *Crit. Rev. Immunol.* **24**:1.
4. Sarraj, M.A. *et al.* (2005) *Dev. Dyn.* **234**:1026.
5. Jiang, Y. *et al.* (2006) *J. Biol. Chem.* **281**:11834.
6. Accession # Q6ZMJ2.