



# Recombinant Human SMCY/JARID1D



**FOR RESEARCH ONLY! NOT FOR HUMAN USE!**

<b>Cat.-no:</b>	<b>300-064</b>
<b>Size:</b>	25 µg
<b>Lot. No.:</b>	According to product label
<b>Country of origin:</b>	Germany

## Scientific Background

<b>Gene:</b>	<i>HY; HYA; JARID1D; KIAA0234; SMCY</i>
<b>Synonyms:</b>	Lysine-specific demethylase 5D; Histone demethylase JARID1D; Histocompatibility Y antigen

H-Y antigen is defined as a male histocompatibility antigen that causes rejection of male skin grafts by female recipients of the same inbred strain of rodents. Male-specific, or H-Y antigen(s), are also detected by cytotoxic T cells and antibodies. H-Y antigen appears to be an integral part of the membrane of most male cells. In addition, H-Y antibodies detect a soluble form of H-Y that is secreted by the testis. The gene (*Smcy/SMCY*) coding for H-Y antigen detected by T cells has been cloned. It is expressed ubiquitously in male mice and humans, and encodes an epitope that triggers a specific T-cell response in vitro. Additional epitopes coded for by different Y-chromosomal genes are probably required in vivo for the rejection of male grafts by female hosts. The molecular nature of H-Y antigen detected by antibodies on most male cells is not yet known. Testis-secreted, soluble H-Y antigen, however, was found to be identical to Müllerian-inhibiting substance (MIS). MIS cross-reacts with H-Y antibodies and identical findings were obtained for soluble H-Y antigen and MIS, i.e., secretion by testicular Sertoli and, to a lesser degree, ovarian cells, binding to a gonad-specific receptor, induction of gonadal sex reversal in vitro and, in cattle, in vivo. H-Y antisera also detect a molecule or molecules associated with the heterogametic sex in non-mammalian vertebrates. Molecular data on this antigen or antigens are not yet available.

## References

1. Wolf U, Cytogenet Cell Genet 80:232, 1998
2. Scott DM et al, J Mol Med (Berl) 75:103, 1997
3. Müller U, Hum Genet 97(6):701, 1996
4. Simpson e et al, Annu Rev Immunol 15:39, 1997

## Sequence

```
ALLVALQRLPVRLPEGEALQCLTERAIGWQDRARKALASEDVTALLRQLAEL
RQQLQAKPRPEEASVYTSATACDP IREGSGNNI SKVQGLLENGDSVTS PENM
APGKGSDELLELSSLLPQLTGPVLELPEAIRAPLEELMMEGLLEVTLDENHS
IWQLLQAGQPPDLDRIRTLLELEKFEHQGSRTSRALERRRRRQKVDQGRNV
ENLVQQELQSKRARSSGIMSQVGREEEHYQEKAADRENMF LTPSTDHSPFLKG
NQNSLQHKDSGSSAACPSLMP LLLQLSYSDEQQLEHHHHHH
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## Database References

<b>Protein RefSeq:</b>	NP_001140177.1
<b>Uniprot ID:</b>	Q9BY66
<b>mRNA RefSeq:</b>	NM_001146705.1

## Product Specifications

<b>Expressed in</b>	E.coli
<b>Purity</b>	> 95% by SDS-PAGE & silver stain
<b>Buffer</b>	50 mM NaP, 300 mM NaCl, pH 8.0
<b>Stabilizer</b>	None
<b>Formulation</b>	lyophilized
<b>Length (aa):</b>	301
<b>MW:</b>	33,87 kDa
<b>Result by N-terminal sequencing</b>	ALLVALQRLPVRLP

**Stability:** The lyophilized human SMCY, though stable at room temperature, is best stored in working aliquots at  $-20^{\circ}\text{C}$  to  $-70^{\circ}\text{C}$ .

**Reconstitution:** The lyophilized human SMCY is supplied in lyophilized form and can be reconstituted in PBS or water. This solution can be diluted into other buffered solutions or stored frozen for future use.



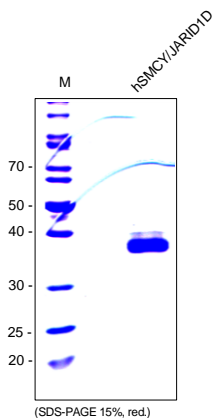
**AVOID REPEATED FREEZE AND THAW CYCLES!**

**Biological Activity:** Not available yet.



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## Handling/Applications



**Fig. 1:** SDS-PAGE analysis of recombinant human SMCY. Sample was loaded in 15% SDS-polyacrylamide gel under reducing conditions and stained with Coomassie blue.