

**SBCS**

Subtract with Carry, setting flags, subtracts a register value and the value of NOT (Carry flag) from a register value, and writes the result to the destination register. It updates the condition flags based on the result.

This instruction is used by the alias [NGCS](#).

31	30	29	28	27	26	25	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
sf		1	1	1	1	0	1	0	0	0	0	Rm				0	0	0	0	0	0	Rn				Rd					
op S																															

**32-bit (sf == 0)**

SBCS [<Wd>](#), [<Wn>](#), [<Wm>](#)

**64-bit (sf == 1)**

SBCS [<Xd>](#), [<Xn>](#), [<Xm>](#)

```
integer d = UInt(Rd);
integer n = UInt(Rn);
integer m = UInt(Rm);
constant integer datasize = 32 << UInt(sf);
```

**Assembler Symbols**

<a href="#">&lt;Wd&gt;</a>	Is the 32-bit name of the general-purpose destination register, encoded in the "Rd" field.
<a href="#">&lt;Wn&gt;</a>	Is the 32-bit name of the first general-purpose source register, encoded in the "Rn" field.
<a href="#">&lt;Wm&gt;</a>	Is the 32-bit name of the second general-purpose source register, encoded in the "Rm" field.
<a href="#">&lt;Xd&gt;</a>	Is the 64-bit name of the general-purpose destination register, encoded in the "Rd" field.
<a href="#">&lt;Xn&gt;</a>	Is the 64-bit name of the first general-purpose source register, encoded in the "Rn" field.
<a href="#">&lt;Xm&gt;</a>	Is the 64-bit name of the second general-purpose source register, encoded in the "Rm" field.

**Alias Conditions**

Alias	Is preferred when
<a href="#">NGCS</a>	Rn == '11111'

**Operation**

```

bits(datasize) result;
bits(datasize) operand1 = X[n, datasize];
bits(datasize) operand2 = X[m, datasize];
bits(4) nzcvc;

operand2 = NOT(operand2);

(result, nzcvc) = AddWithCarry(operand1, operand2, PSTATE.C);
PSTATE.<N,Z,C,V> = nzcvc;
X[d, datasize] = result;

```

## Operational information

If PSTATE.DIT is 1:

- The execution time of this instruction is independent of:
  - The values of the data supplied in any of its registers.
  - The values of the NZCV flags.
- The response of this instruction to asynchronous exceptions does not vary based on:
  - The values of the data supplied in any of its registers.
  - The values of the NZCV flags.

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