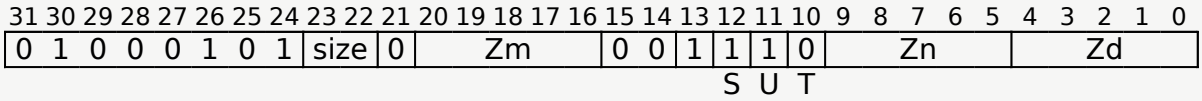
## UABDLB

Unsigned absolute difference long (bottom)

Compute the absolute difference between the even-numbered unsigned integer values in elements of the second source vector and the corresponding elements of the first source vector, and place the results in the overlapping double-width elements of the destination vector. This instruction is unpredicated.




**UABDLB <Zd>.<T>, <Zn>.<Tb>, <Zm>.<Tb>**

```
if !HaveSVE2() && !HaveSME() then UNDEFINED;
if size == '00' then UNDEFINED;
constant integer esize = 8 << UInt(size);
integer n = UInt(Zn);
integer m = UInt(Zm);
integer d = UInt(Zd);
```

### Assembler Symbols

<Zd> Is the name of the destination scalable vector register, encoded in the "Zd" field.

<T> Is the size specifier, encoded in “size”:

| size | <T> |
|---|---|
| 00 | RESERVED |
| 01 | H |
| 10 | S |
| 11 | D |

<Zn> Is the name of the first source scalable vector register, encoded in the "Zn" field.

<Tb> Is the size specifier, encoded in “size”:

| size | <Tb> |
|---|---|
| 00 | RESERVED |
| 01 | B |
| 10 | H |
| 11 | S |

| | |
|---|---|
| <Zm> | Is the name of the second source scalable vector register, encoded in the "Zm" field. |

**Operation**

```
CheckSVEEnabled();
constant integer VL = CurrentVL;
constant integer elements = VL DIV esize;
bits(VL) operand1 = Z[n, VL];
bits(VL) operand2 = Z[m, VL];
bits(VL) result;

for e = 0 to elements-1
    integer element1 = UInt(Elem[operand1, 2*e + 0, esize DIV 2]);
    integer element2 = UInt(Elem[operand2, 2*e + 0, esize DIV 2]);
    integer res = Abs(element1 - element2);
    Elem[result, e, esize] = res<esize-1:0>;

Z[d, VL] = result;
```

**Operational information**

If FEAT_SVE2 is implemented or FEAT_SME is implemented, then 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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